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**0.5 g. paracetamol
analgesic tablets**

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Bottles 500 tablets
trade price 27/9 each

**TABALGIN brand
paracetamol ELIXIR**

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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and
all sections of the drug, pharmaceutical and
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland
and the Pharmaceutical Society of Northern Ireland*

Volume 173

May 14, 1960

No. 4187

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ANNUAL SUBSCRIPTION

which includes The Chemist and Druggist Diary and
Year Book, £2 10s. Single copies one shilling each.

GLASS CONTAINER MANUFACTURERS INTRODUCE

FREE Container-acceptance Testing Service

A new service designed to help Packers

Appreciating that a need existed for a service to enable Packers to test in advance consumer acceptance of any new pack, Britain's glass container manufacturers have set up a Container-acceptance Testing Service. This new service will enable any Packer to test new packs in any one, or all four of the following ways:—1 Design Preference Testing. 2 Container In Use Testing. 3 Shelf Testing. 4 Area Test Marketing.

FREE SERVICE

In order that this service should be used as widely as possible, the services under headings 1, 2 and 3 are offered quite freely to packers. In the case of Area Test Marketing Schemes, a nominal charge will be made for planning the operation.

SECURITY

Any of these testing operations can be carried out on new products with absolute security. If desired, the Packer can have the anonymity of employing one of several brand names that have been registered for the purpose.

If you would care to have further details of this service, please do not hesitate to ask, irrespective of whether your interest is immediate or not. A booklet explaining the scheme is available from your Glass manufacturer, or from the Federation upon request.



1 DESIGN PREFERENCE TESTING



Facilities are available to pre-test the acceptability of new designs on a consumer panel of 400 households in London, Birmingham, Manchester and Glasgow. From this panel a balanced sample can be drawn to match the known, or probable, consumer market for the product.

2 CONTAINER IN USE TESTING



Any new container and the product for which it was designed can be tested in actual home use by the consumer panel over any agreed period. The panel's experience of an opinion of the pack and product will be analysed and presented as a report.

3 SHELF TESTING

The sales appeal of a new pack can be tested in self-service or other stores in the main centres of population. The sales will be recorded and analysed by class of store and locality. The pack can be tested either alone or against any alternative pack.



4 AREA TEST MARKETING

Facilities are available for area test marketing any new product. An expertly staffed marketing service will plan, organise, and if desired, carry out test area marketing campaigns in their entirety, on behalf of Packers who wish to launch a new glass packed product.



See how good things are in **GLASS**



The CHEMIST AND DRUGGIST

Volume 173

MAY 14, 1960

No. 4187

More Approved Names A SUPPLEMENTARY LIST PUBLISHED

TWENTY approved names are included in a supplementary list just issued by the British Pharmacopœia Commission. The list contains the following names:—

APPROVED NAME	OTHER NAMES
Amphotericin	Polyene antibiotics isolated from a strain of a <i>Streptomyces</i> species, referred to as <i>Streptomyces nodosus</i> . (Specific substances are designated by a terminal letter; thus, amphotericin B). Fungizone is amphotericin B.
Benzonate	2-(ω -Methoxypolyethylene-oxy)ethyl <i>p</i> -butylaminobenzoate. Tessalon.
Benzthiazide	3-Benzylthiomethyl-6-chloro-7-sulphamoylbenzo-1:2:4-thiadiazine 1:1-dioxide. Fovane.
Chlormidazole	1- <i>p</i> -Chlorobenzyl-2-methylbenzimidazole.
Chlorzoxazone	5-Chlorobenzoxazolin-2-one.
Cinnarizine	1- <i>trans</i> -Cinnamyl-4-diphenylmethylpiperazine.
Diethylpropion	α -Diethylaminopropiophenone. Tenuate is the hydrochloride.
Guanethidine	1-(2-Guanidinoethyl) azacyclooctane. Ismelin is the sulphate.
Itramin tosylate	2-Nitratoethylamine toluene- <i>p</i> -sulphonate. Nilatil.
Methandienone	17 β -Hydroxy-17 α -methyl-androsta-1:4-dien-3-one. Dianabol.
Methdilazine	10-(1-Methyl-3-pyrrolidinylmethyl) phenothiazine.
Metronidazole	1-(2-Hydroxyethyl)-2-methyl-5-nitroimidazole. Flagyl.
Nealbarbitone	5-Allyl-5-neopentylbarbituric acid. Censedal; Nevental.
Paromomycin	An antibiotic produced by <i>Streptomyces rimosus</i> forma <i>paromomycinus</i> . D-Glucosaminideoxystreptamine D-ribosediainohexose.
Phenethicillin	Humatin is the sulphate. 6-(α -Phenoxypropionamido) penicillanic acid (1-Phenoxyethyl) penicillin.
Pralidoxime iodide	Broxil is the potassium salt.
Sodium ipodate	Picolinaldoxime methiodide. Protapam.
	Sodium β -(3-dimethylamino-methylenamino-2:4:6-triiodophenyl) propionate. Biloptin.

Spironolactone	β -(7 α -Acetylthio-17 β -hydroxy-3-oxoandrosta-4-en-17 α -yl) propionic acid lactone. Aldactone.
Sulphinpyrazone	1:2-Diphenyl-4-(2-phenylsulphinylethyl) pyrazolidine-3:5-dione. Anturan.
Thiopropazine	2-Dimethylsulphamoyl-10-[3-(4-methylpiperazin-1-yl)propyl] phenothiazine. Majepitil is the methanesulphonate.

In-patient Statistics

HOSPITAL INQUIRY REPORT

PART I of the Report on the Hospital In-patient Inquiry, for 1958 (H.M. Stationery Office, price 1s. 6d.), is the first in a new series published jointly by the Ministry of Health and the General Register Office. The inquiry has a twofold object: to provide information

about the type of patients and diseases treated, to assist in the administration of the hospital service, and to supplement information from mortality and other morbidity statistics about the pattern of ill-health in the community. Previous reports, for the years 1949, 1950-51 and 1955, were published as supplements to the Registrar General's Statistical Review. A report on 1956-57 in the new series is in the course of preparation and should be published later this year. The report for 1958 is being published in two parts: Part I gives provisional figures and comprises sixteen pages of summary tables and data on selected important conditions for 1958 and certain figures for 1955-57, and is being published separately to make this information available earlier than would otherwise be possible. Part II, to be published later, will contain detailed tables with commentary.

Agricultural Chemicals

MORE SUBSTANCES CONTROLLED

THE Agriculture (Poisonous Substances) Amendment Regulations, 1960 (H.M. Stationery Office, threepence), which came into operation on May 6, brought endothal (7-oxabicyclo(2,2,1) heptane-2,3-dicarboxylic acid) and its salts; Gusathion (S-(3,4 dihydro-4-oxobenzo-(1,2,3) triazin-3-yl) methyl *OO*-



COLLABORATION FRANCO-BRITANNIQUE (VOIR AUSSI p. 567)

Pour aider à MM. Frank Arnal, H. S. Grainger et Verdeil à décoder une affiche dans la boutique d'apothicaire du 18^e siècle au musée Masséna, Sir Hugh Linstead apporte la lumière d'une chandelle.

To assist M. Frank Arnal, Mr. H. S. Grainger and M. Verdeil in deciphering a label in the eighteenth-century apothecary shop in the Masséna museum, Sir Hugh Linstead brings to bear on the subject the light of a candle.

[Photo, Dognibène, Nice.]

dimethyl phosphorothiolothionate (C. & D., March 12, p. 288) and phosphamidon (2-chloro-2 diethylcarbamoyl-1-methylvinyl dimethyl phosphate) within those specified groups of poisonous substances that employers may not allow workers in agriculture and horticulture to use in certain operations, unless the prescribed safety measures, including the wearing of protective clothing, are observed.

Scottish Department

EXECUTIVE'S ANNUAL REPORT

THE annual report of the Executive of the Scottish Department of the Pharmaceutical Society, 1959-60, shows a total expenditure of £14,700 (against £15,727 in 1958). The examination expenses amounted to £7,228 (£7,470). The number of members resident in Scotland is 2,854, which is 58 less than in 1958-59. Referring to the National Health Service the report states that following the report of the Scottish Committee on Prescribing Costs, the standing committee advised the Department of Health and the British Medical Association that chemist contractors would welcome the opportunity to discuss matters of common interest with the general practitioners in their own areas. Progress was continuing with the investigations being carried out jointly by the Department of Health and the chemists' representatives into the "level of chemists' remuneration and the effect of drug buying practices." Referring to jury service, the report states that, with the assistance of Sir Hugh Lindsay, an effort was being made to have a private member's bill introduced into Parliament seeking to bring pharmaceutical chemists in Scotland into line with those in England and Wales in respect of their liability to jury service.

N.H.S. in Scotland

STATISTICS FOR 1959

INCLUDED in the *Digest of Scottish Statistics* (H.M. Stationery Office, 5s.) are the following details concerning the National Health Service in Scotland during the calendar year 1959. The figures for 1958 are in parentheses:—Prescriptions dispensed, 22 millions (20.4). Gross payments to pharmacists, by patients, £1.2 millions (£1.1); from public funds, £7.4 millions (£6.5). Estimated cost per prescription, gross 91.8d. (89.2d.); net 79.1d. (76.4d.).

IRISH NEWS

THE REPUBLIC

Duty on Tablets

MINISTER GIVES GOVERNMENT'S CASE

IRISH pharmaceutical manufacturers had been unable, because of the long-established contacts of "external" manufacturers on the Irish market, to obtain a reasonable share of the pharmaceutical trade, and the primary object in imposing duty on certain medicinal tablets was to assist the home industry to overcome that disability, said the Minister for Industry (Mr. J. Lynch) in the Senate on April 6. The Minister was speaking on a motion (later withdrawn), asking him to make a statement

on the position. Mr. Lynch said that the duty on medicinal tablets was not in conflict with the general tariffs policy of the Government. As indicated in the programme of economic expansion, it would continue to be the policy of the Government to grant protection for worth-while industries. The industry in question was in that category. The company chiefly concerned had been for several years producing goods that complied in every respect with the requirements laid down in the British Pharmacopoeia and British Pharmaceutical Codex, and had undertaken that the prices of its products would correspond with the prices of similar tablets in Britain. Irish-made tablets thus corresponded, and would continue to correspond, in price with British prices. Where requirements could not be met by home-manufactured tablets, licences were, and would continue to be, available for the importation of tablets. "There are no grounds, therefore, for the suggestions made that the effect of the duty will be to bring about a general increase in the price of medicinal tablets."

NORTHERN IRELAND HEALTH BOARD

A chemist asked to improve dispensary equipment

A CHEMIST is being asked by the Northern Ireland General Health Services Board to make good certain "deficiencies" at his pharmacy. It was reported at a recent meeting of the Board that the chemist had no troy weights, no autoclave, no running water and no British Pharmaceutical Codex. His dispensary premises measured 4 ft. by 7 ft. Mr. W. H. Boyd commented that he thought the Board should be empowered to inspect the premises of prospective pharmaceutical contractors in view of the low standard found in some instances. The pharmaceutical advisory committee, however, decided that the matter should be referred to the Local Pharmaceutical Committee in the first instance.

Approval Awaited

The pharmaceutical advisory committee reported that the approval of the Ministry of Health of the drug testing scheme was still awaited. The Ministry's reply on dispensing by unqualified assistants was also awaited. The committee agreed that the Local Pharmaceutical Committee should be informed of the position in regard to both matters and that the Ministry should be asked to provide an early reply.

The assistant secretary stated that an appreciable number of chemists had sought permission to close their shops on St. Patrick's Day and the Board had approved, provided that a service to the public was maintained. It was agreed that, in future, chemists seeking to close on St. Patrick's Day, or on any other day not normally recognised as a public holiday, should give two months' notice to the Board so that there would be sufficient time for the Local Pharmaceutical Committee to make any necessary arrangements for an adequate service in the area.

Delays in the publication of drug

THE NORTH

Drugs Import Delayed

CUSTOMS HOLD THEM FOR FIVE WEEKS

AMERICAN drugs for the treatment of skin disease, sent to a Belfast specialist, were held up by the Customs authorities for five weeks because clearance documents were not available. The drugs were sent to the specialist by an American manufacturer for test purposes. The Royal Victoria Hospital was to deal with the Customs procedure in the handling of the goods but because the hospital was not the importer the drugs could not be cleared. The specialist then put the matter in the hands of clearing agents in Belfast and they had to await the arrival of documents from the manufacturer necessary to clear the drugs. The clearing agents later stated that when importers wanted goods cleared they should contact the Customs or clearing agents to find out the procedure. In cases of emergency goods could be cleared immediately on payment of a deposit and on compliance with certain regulations.

test analyses had been taken up with the Board's analysts by the pharmaceutical services committee, which had been reminded by the assistant secretary of similar criticism by the services committee. The analysts had replied that the delays that had occurred were due mainly to staffing difficulties that were being overcome, and to the death of a partner in the firm in July 1958. The analysts pointed out that the sporadic nature of the sampling did not make for speedy reporting and they suggested that a monthly or quarterly basis of sampling would be desirable from their point of view. They requested the Board's assessment of a reasonable interval between the submission of a drug test and the publication of the result. The committee agreed that from three to four weeks would be a reasonable time to allow for analyses and the reports of results of drug tests and that consideration should be given to more regular submissions to the analysts.

Testing Scheme Amendments

The finance and general purposes committee reported that they had approved, and had instructed the secretary to pursue with the Ministry, the proposed amendments to the drug testing scheme which would enable analyses to be sought from the forensic science laboratory.

The pharmaceutical services committee had approved payment of 10s. 6d. to a pharmacist for a Flowmeter tube that had been broken by a patient, now dead, in a period of delirium tremens. Mr. W. H. Boyd raised the problem of chemists who felt obliged to dispense prescriptions for face masks and atomisers and he asked if the Board could not pay. The assistant secretary pointed out that the Board could not normally pay for any item not covered by the drug tariff.

NEWS IN BRIEF

AT March 15 the retail price index (January 17, 1956=100) was 110, the same as at February 17 and at March 17, 1959.

THE one-hundredth title in the "Choice of Careers" series of booklets prepared by the Central Youth Employment Service and available from H.M. Stationery Office (price 1s. 3d.) is "The Scientist."

AT the recent annual meeting of the Coventry and Warwickshire Branch, Pharmaceutical Society, six past-chairmen were presented with badges to commemorate their year of office. The recipients were Messrs. O. T. Hall, E. M. Buckler, D. S. Aitken, S. J. Starkey and L. Bonham. Mr. A. W. M. Bales received a badge on behalf of his late father, Mr. W. A. Bales. A seventh past-chairman, Mrs. E. M. Rendall, was unfortunately unable to be present to receive her badge.

THE council of the Royal Institute of Chemistry, with the concurrence of the Society of Maccabaeans and on the recommendation of a specially appointed advisory committee, is making two awards of the Meldola medal for 1959. The recipients are Dr. J. I. G. Cadogan, for his work in the field of organic chemistry, with special reference to reactions of free radicals in solution and to reactions of organophosphorus compounds; and Dr. T. C. Waddington, for his work in the fields of physical and inorganic chemistry, with special reference to thermochemistry.

LOCAL OFFICERS PHARMACEUTICAL SOCIETY

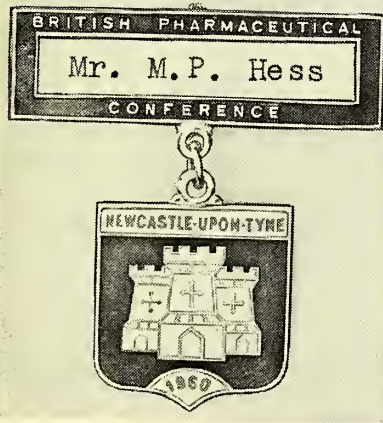
Coventry.—Chairman, F. White; Vice-chairman, H. S. Linton; Treasurer, W. Kirkland; Secretary, J. Hiatt; Assistant secretary, L. Bonham.

Portsmouth.—Chairman, Mrs. M. Yoward; Vice-chairman, N. Francis; Treasurer, A. G. Tatford; Secretary, A. C. Yoward, 18A Victoria Road, Emsworth, Hants.

PHARMACEUTICAL COMMITTEE

Buckinghamshire.—Chairman, G. F. A. Downer; Vice-chairman, H. P. Elliott; Secretary-Treasurer, Miss H. E. Walker, 46 Well Street, Buckingham.

CONFERENCE BADGE



Badge prepared by the Conference Local Committee for the use of members of the British Pharmaceutical Conference, Newcastle-upon-Tyne, 1960. The badge is in red and white.

TOPICAL REFLECTIONS

By Xrayser

The new legislation

I made reference a week or two ago to the difficulties of the pharmacist in interpreting the new legislation relating to the "central nervous system" and other drugs. In so doing, I asked a question relating to the position of thyroid and its place (if any) in the restrictions. I return to the question, since I feel it is one in need of clarification. The entry states: "Thyroid gland, the active principles of; their salts." That appears to me to be saying in effect: "The active principles of thyroid gland and their salts." Thyroid gland is a synonym for thyroid and, according to the reference books, it consists of two active principles, thyroxine and tri-iodo-thyronine. Salts of those active principles, in the form of L-thyroxine sodium and liothyronine sodium, are occasionally dispensed. According to the form the entry takes, the Act seems to say that only the active principles and their salts are affected. Consider, for comparison, the fourth schedule entry under the heading of barbituric acid: "Barbituric acid; its salts; derivatives of barbituric acid; their salts; compounds of barbituric acid," etc. If the thyroid entry had read: "Thyroid gland; its active principles; their salts," the intention would have been clearly to include the whole substance. But that is not how it reads, and I find, after discussion with colleagues, some conflicting opinions. I think the matter calls for clarification.

The good old days

Mr. Dopson's article (pp. 544-45) dealing with an attempt to secure shorter working hours for druggists and their staffs in Edinburgh, paints a picture of hard, unremitting toil in the year 1839. It seems unbelievable to us today that it was necessary to submit an appeal to have the working day terminate at the early hour of 9 p.m., and though no indication is given of the actual hours of work, the old-time druggist must have endured a working week in excess of 100 hours. If he commenced his day at 8 a.m.—a time that was the recognised opening hour for many years after the one that was mentioned in the article—and was still at work until 10 or 11 p.m., then Jack the druggist, if he conformed to the old adage, must have been a very dull boy indeed. One can only marvel that it was found possible to attract recruits to the profession, though it is true that conditions generally were comparable, and that, for anyone who wanted an easy life, with a generous amount of leisure, arrangements should have been made that he should be born wealthy. What could the staff find to do during all those hours? Even if one allows that every pharmacy was a small manufacturing unit in the galenic field, and that infusions were made daily after fresh bruising of the crude drugs, there still seems to be an almost interminable day to supply the medical and pharmaceutical needs of the community. The same long hours were put in over the country as a whole, and our veterans will tell us that it took a world war in 1914 to bring about more reasonable conditions. I note that one of the resolutions quoted in the article—that of the Royal College of Physicians—states that it is the opinion of the College that at least one qualified person should be in attendance at the shop at all hours, Sundays not excepted. Apart from a feeling of amazement at the demand, one wonders just what a "qualified" person was in Edinburgh in 1839.

An electuary

In the formula for Admiral Lord Anson's electuary (p. 543) one of the ingredients mentioned is guinguineum. I have no record of the drug but, taken in conjunction with the other ingredients mentioned, it seems reasonable to assume that it is guaiacum or guaiacinum, in which case the admiral paid £5,000 for a formula which had (and may still have in some places) a long run under the name of Chelsea Pensioner. So the Senior Service in the end takes second place to the Army. What, I wonder, is the demand today for that compound confection? Has it disappeared with the coming of the National Health Service? It would be interesting to know.

TRADE NOTES

In Redesigned Pack.—Genatosan, Ltd., Loughborough, Leics, are now issuing their Selgin toothpaste in a redesigned pack.

Cash Prize Competition.—Rose-Kia-Ora Sales Co., 13 Grosvenor Road, St. Albans, Herts, announce a prize competition in which prizes to a total value of £2,800 are offered for window displays.

Discontinued.—Pfizer, Ltd., 137 Sandgate Road, Folkestone, Kent, announce that they have discontinued production of Deltalgycortril tablets and of Viterra capsules. Supplies are continuing to be sent out until present stocks are exhausted.

Wedding Gift to Princess.—Roberts Windsor, Ltd., The Acre, Windsor, Berks, recently presented to Princess Margaret on the occasion of her wedding a white silk and satin casket containing a set of their Otto of Roses toilet preparations.

Product Name Changed.—Hodges & Moss, Ltd., 10 Baker Street, Shrewsbury, announce that their veterinary product sulphadimidine injection 33½ per cent. solution, is now being marketed under the name Mediject. No change has been made in formulation, packs or prices.

£500 in Prizes.—Prizes offered by Genatosan, Ltd., Loughborough, Leics, in a Sebbix hairlines competition are 1, £100 or a visit to Paris; 2, £50; 3, £25; plus 100 consolation prizes of £3 3s. each. Display bonuses of £10, £5, and £3 respectively go to the shops or departments employing the prize-winners. Entry forms may be obtainable from the company. Closing date is June 13.

An Advertisement Corrected.—Owing to an unfortunate error in an advertisement for Woodward's gripe water (W. Woodward, Ltd., 31 Clapham Road, London, S.W.9) which appeared in the May 7 issue of the *C. & D.*, discounts on orders for 3 gross minimum were shown as 25 per cent., 12½ per cent. and 5 per cent. Messrs. Woodward point out that those discounts apply to orders for 10 gross minimum. Discounts on 3 gross minimum are 25 per cent. and 12 per cent. only.

Through Usual Channels.—Ulter (Bradford), Ltd., inform the trade that both that company and the Teasdale Chlorodyne Co. are unaffected by the take-over of Bradford Aerosols, Ltd., by Reckitt & Co., Ltd., and that business is being carried on as usual at 12 Bank Street, Wibsey, Bradford, Yorks. The only lines of the two companies affected by the take-over are the aerosol products formerly distributed by Messrs. Ulter on behalf of Bradford Aerosols, Ltd. Ulter stomach tablets, Teasdale's chlorodyne, Bak strong rub, Acacian balsam, "Restorative Assimilant" and N.H.O. nature's herbal ointment continue to be manufactured by Messrs. Ulter and supplied through wholesalers.

Affected by Poisons Amendments.—The following products of BURROUGHS WELLCOME & Co., 183 Euston Road, London, N.W.1, have, under the Poisons Rules and Poisons List Order,

poisons status indicated:—Now in Schedule 7, Part I: Actidil brand triprolidine hydrochloride and elixir; Actified brand tablets; Histantin brand chlorcyclizine hydrochloride tablets; Marzine brand cyclizine hydrochloride motion sickness remedy. Now in Schedule 4, Part B: Methedrine brand injection of methylamphetamine; Methedrine brand tablets; Tabloid brand sulphadiazine; Tabloid brand sulphaguanidine; Tabloid brand thyroid. Now in Schedule 7: Valoid brand cyclizine hydrochloride. Veterinary products now in Schedule 4, Part B: Combestrol brand hexoestrol and stilboestrol; Tabloid brand hexoestrol (veterinary); Wellcome brand stilboestrol dipropionate injection.—IMPERIAL CHEMICAL INDUSTRIES, LTD. (pharmaceuticals division), Fulshaw Hall, Wilmslow, Ches, point out that the following medical specialities of the company are affected by recent changes in the Poisons Rules:—S-MEZ Sulphamezathine (sulphadimidine, B.P.): now in Schedule 4, Part B (unless intended for poultry diseases, when it is a Part I poison only; Sulphamezathine 16 per cent. sodium solution may now be sold without prescription for all poultry diseases instead of as formerly for coccidiosis only); Nilgerex (isothipendyl hydrochloride) and

its preparations: Schedule 7; Mepavlon (meprobamate, B.P.C.): Schedule 4B; Premarin (conjugated oestrogenic substances (equine) preparations): Schedule 4B.

Bonus Offers

BRISTOL-MYERS CO., LTD., 2 Prince Regent Road, Castlereagh, Belfast, 5. Ingram shaving creams. Twelve invoiced as eleven (and bonus tube tax-free).

GLAXO LABORATORIES, LTD., Greenford, Middlesex. Glucodin and Farex. Three free cartons in every bonus parcel of twenty-four of either product. May 16 to June 18. From start of bonus offer, Glucodin will be available in pack of new style already announced to chemists.

W. SUTTON & Co., DRUGGISTS SUNDRIES LONDON, LTD., Horseshoe Lane, Enfield, Middlesex. Packed pharmaceutical preparations (calamine lotion, Epsom salts, sodium bicarbonate and liquid paraffin). Thirteen invoiced as twelve on minimum order of 5 gross assorted, taken over twelve months.

VERNON & Co., LTD., Preston, Lancs. Prestoband antiseptic self-adhesive bandage. Extra 10 per cent. on order value 40s. or over received before May 31.

NEW PRODUCTS AND PACKS

Prednisolone Eye/ear Drops.—Glaxo Laboratories, Ltd., Greenford, Middlesex, have made available 10-mil packs of Predsol and Predsol-N (prednisolone phosphate and prednisolone phosphate with neomycin) for inflammatory conditions of the eye or ear. (Until now the drops have been marketed in 3-mil vial only.)

Monoamine Oxidase Inhibitor.—Roche Products, Ltd., 15 Manchester Square, London, W.1, announce the introduction of a further monoamine oxidase inhibitor, Tersavid (1-benzyl-2-pirallorphydrazine), for particular use in angina pectoris. The product is presented as 50-mgm. scored tablets in packs of fifty and 250.

Making-good Protein Deficiency.—Lloyd-Hamol, Ltd., 11 Waterloo Place, London, S.W.1, are marketing tablets of Lysinex brand l-lysine (l-lysine monohydrochloride, 300 mgm., with Androstanolone (androstan-17 β -ol-3-one)) for patients with disturbed protein metabolism or insufficient dietary protein intake. The packs are bottles of twenty-five and 100.

Mepyramine Maleate with Zinc Oxide.—May & Baker, Ltd. (distributors: Pharmaceutical Specialities (May & Baker), Ltd.), Dagenham, announce the introduction of Anthical cream, a companion to Anthical lotion. The cream contains mepyramine maleate with zinc oxide, and provides soothing relief in sunburn, jelly-fish and nettle stings, mosquito and other insect bites, prickly heat, urticaria and other pruritic conditions. The product, a pink-tinted preparation for topical use, is presented in display outer of ten 1-oz. tubes.

New Vaccine Products.—Parke, Davis & Co., Ltd., Staines Road, Hounslow, Middlesex, announce the introduction of a new range of vaccine products and packs including catarrh vaccines (pro-

phylactic and public schools); cholera vaccine; diphtheria, diphtheria-pertussis, diphtheria-tetanus and diphtheria-tetanus-pertussis prophylactics; staphylococcus toxoids A and B; tetanus toxoid; typhoid-paratyphoid A and B and A, B and C vaccines; typhoid-paratyphoid A and B and cholera vaccine; and typhoid-paratyphoid A and B vaccine and tetanus toxoid.

Aminosalicylate with Isoniazid.—There are now available from A. Wander, Ltd., London, W.1, cachets each containing 2 gm. of sodium aminosalicylate, B.P., and 50 mgm. of isoniazid, B.P. The product, which is named Pasi-nah 302, is exclusively for treating all forms of tuberculosis. It provides medication for twenty-four hours from a single convenient pack of six cachets (only six need be taken per twenty-four hours, either as three twice daily or as two three times daily), and the cachets are smooth (without sharp edges). The container is a tin of 180 (thirty days' supply).

Aldosterone Blocking Agent.—G. D. Searle & Co., Ltd., Lane End Road, High Wycombe, Bucks, announce the introduction of a new speciality, Aldactone brand spironolactone, claimed "the first specific aldosterone-blocking agent." By blocking the effect of aldosterone, which is the major cause of resistance to diuretics, the product provides relief of resistant or advanced oedema, even when all other agents, alone or in combination, are ineffective or are only partly effective. The new therapeutic principle embodied in the product extends the control of oedema and ascites in congestive heart failure, hepatic cirrhosis, the nephrotic syndrome and idiopathic oedema. Aldactone is available in bottles of twenty and 100 yellow compression-coated tablets, each containing 100 mgm.

BIRTHS

RICHARDSON.—On April 14, to Audrey Christine Richardson, M.P.S. (née Arthur) 11 Manor Gardens, Effingham, Surrey, a son.

MARRIAGES

NEAL—HARDMAN.—At Allerslie parish church, Coundon, Coventry, on April 23, Edward Terrence Neal, M.P.S., 105 High Street, Wealdstone, Middlesex, to Barbara Ann Hardman, M.P.S., 76 Kings Road, Coundon.

DEATHS

HADFIELD.—On April 21, Mr. Sydney Herbert Hadfield, M.P.S., Deepdale Skin Dispensary, Preston, Lancs, aged eighty-one.

HARRISON.—On April 13, Mr. Joseph Walton Harrison, M.P.S., 169 York Road, West Hartlepool. Mr. Harrison qualified in 1926.

HEMINGWAY.—On April 20, Mr. Cyril Hemingway, M.P.S., 62 Coombe Park, Bath, Somerset. Mr. Hemingway qualified during 1920.

JEUNE.—On April 20, Mr. Alfred Clarence Jeune, M.P.S., 18 Coniston Road, Leamington Spa, Warwick. Mr. Jeune qualified in 1922.

MACKAVOY.—On April 20, Mr. John Richard Mackavoy, M.P.S., 14 Sudley Road, Bognor Regis, Sussex. Mr. Mackavoy qualified in 1920.

RICHARDSON.—On May 7, Mr. A. W. Richardson, who, until his retirement in 1958, was with Kodak, Ltd., Kingsway, London, W.C.2, for thirty-seven years. Mr. Richardson served the company in many important capacities, having been manager of the finisher sales division, and then general sales manager. He later organised and became manager of the merchandise department, the position he occupied at the time of his retirement, after which he was retained by Kodak, Ltd., as a consultant on photo-finishing matters.

WALTON.—On April 15, Mr. Thomas Robert Walton, M.P.S., Box 31, Kloof, Natal, South Africa. Mr. Walton, who qualified in 1902, was formerly managing director of Allen & Hanburys (Africa), Ltd.

PERSONALITIES

MR. HERBERT WILLIAM PALMER, the newly elected president of the Association of British Pharmaceutical Industry, has been managing director of Glaxo Laboratories, Ltd., since 1956. Joining the company in 1928 as an honours graduate in commerce, Mr. Palmer has been concerned with many major building and plant installation projects at home and overseas includ-

ing the erection of antibiotics plants at Barnard Castle and Ulverston and of a cortisone plant at Montrose. In his early days with Messrs. Glaxo he spent considerable time in Australia and Belgium. Later he travelled all over the world in connection with the development of his company's interests overseas.

DR. ERNEST GUENTHER, who was guest of honour at a luncheon given by the British Aromatic Compound Manufacturers' Association in the Guildhall, London, on May 3, is vice-president and technical director of Fritzsche Brothers, Inc., New York. Before receiving his doctorate in 1920 he specialised in organic chemistry at the University of Zurich, Switzerland, under the Nobel prize-winner: Dr. Paul Karrer. It was as an assistant to Professor Albert Hesse, an expert on natural flower oils, that Dr. Guenther became acquainted with the subject of essential oils. From 1921 to 1924 he worked as a chemist in various European branches of a leading cosmetic and soap manufacturer and at the end of 1924 became associated with Fritzsche Brothers, Inc., New York, one of the oldest American essential oil houses. More than thirty years of experience in field, factory and laboratory have given Dr. Guenther a wide and indeed unique background in the subject of essential oils; he has personally investigated the production of every commercially important volatile oil in the country of origin. Dr. Guenther is also widely known as a lecturer on his subject. In the course of numerous trips to foreign countries he has taken many motion



pictures, which have been exhibited at meetings of scientific and trade associations. His lecture to members of the British Aromatic Chemical Manufacturers in London in 1958 was so successful that he has paid a return visit to introduce a film covering his latest tour of South America. In 1940 Dr. Guenther began work on his six-volume treatise "The Essential Oils," which required more than ten years for its completion. He has since been preparing a seventh—supplementary—volume, incorporating the latest information in the fields of chemistry and production, based upon his more recent investigations in various parts of the world.

MR. ANTHONY JAMES BAILEY, a twenty-one-year-old student at the pharmacy department, Leicester College of Art, Technology and Commerce, was elected President of the British Pharmaceutical Students' Association at the Association's recent annual conference (see p. 573). Mr. Bailey, who takes his final Pharmaceutical Chemist Qualifying examination in June, was educated at Epsom College, Surrey, before going to study at Leicester. He is chairman of the technical students' committee at the Leicester College and sits on the students' executive committee of the College that controls the day-to-day workings of the College's association, which looks after about 8,000 students. He is an active supporter of the National Union of Students and just before the B.P.S.A. conference he attended the Easter council meeting of N.U.S. in Newcastle-upon-Tyne. His family live in Lincoln where his father is established in practice as a doctor.



Hacking down the mentha arvensis plant in the State of Paraná, Brazil. From Dr. Guenther's latest film (see p. 580).

COMPANY NEWS

Previous year's figures in parentheses

P. P. PAYNE & SONS, LTD.—Group net profit for 15 months to December 31, 1959, £111,782 (£40,324 for year) and dividend 25 per cent. (20 per cent.). A high rate of productivity has been maintained in the current year with a further increase in turnover, according to the chairman (Mr. J. E. Payne).

BOOTS PURE DRUG CO., LTD.—Subject to audit the results for the year ended March 31 are as follows: Group profits before tax but after depreciation and interest on loan stock, £7,560,697 (£4,997,839); less tax, £3,734,693 (£2,555,598); net profit of Boots Pure Drug Co., Ltd., after all charges including tax, £3,148,027 (£2,072,663). Ordinary dividend for year 21 per cent.

GREEFF-CHEMICALS HOLDINGS, LTD.—Ordinary dividend for 1959 is raised to 30 per cent. (from 25 per cent.). A one-for-one scrip issue is being proposed. Group profits rose to £270,923 (£218,634) before tax of £115,811 (£92,691). The basis of accounting has been altered so as to include only dividends received from trade investments instead of dividends declared and receivable after the end of the year. On the altered basis the group profit for 1959 is £125,059 before tax of £59,289.

THE BRITISH DRUG HOUSES, LTD.—In his statement accompanying the accounts for 1959 the chairman (Mr. G. C. R. Eley) mentions that the company's overall business is running satisfactorily, and should enable a distribution in dividend similar to that for 1959. He adds, however, that it must not be forgotten that the company is in the early stages of a period of considerable expansion, the main results of which lie in the more distant future. As previously reported (*C. & D.*, April 23, p. 464), group net profit for 1959 increased to £326,688 (£288,991). Group sales were a record at over £10 millions, an increase of more than £3 millions on the previous year's peak. The figures for 1959 include ten months of J. R. Gibbs, Ltd., and of Rowland James, Ltd., acquired during the year, but would still have represented a new peak if allowance is made for the acquisitions.

U.S. DRUG INDUSTRY

Answering Kefauver's charges

Dr. Austin Smith (president of United States Pharmaceutical Manufacturers' Association) returned to the witness stand of the Kefauver anti-monopoly subcommittee recently to complete the testimony he began in February (*C. & D.*, March 12, p. 282), which was cut short at the time because of the civil rights filibuster in the Senate.

He was armed with charts, graphs and exhibits to support the industry's argument that conditions were nothing like those which had been pictured by Senator Kefauver.

Dr. Smith said that some of the "evidence" given the subcommittee by other witnesses as to amounts spent by companies on promotional activities was completely false. In one case a

company had been accused of spending \$3.5 millions to send literature and samples to 150,000 doctors in October 1957, but when investigated it turned out to be an expenditure of \$180,000 and 6,000 doctors, he said.

"Men from industry, if given the chance, could explain those situations, and it would not have to depend upon unreliable estimates."

He told the subcommittee that over the past six years there had only been four to ten actions per year involving any manufacturer who was a member of the PMA. On the other hand, there were anywhere from 139 to 203 actions a year taken against non-PMA members.

(PMA members accounted for about 95 per cent. of the drug industry production of the country.)

Dr. Smith testified that it was impossible to show that the drug industry was monopolistic or highly concentrated, for all the evidence was to the contrary.

"Dr. Blair's chart would have you believe that three companies control the market for prednisolone." Actually the standard references used by doctors and chemists show that this market is

shared, not by three manufacturers, but by forty-three. And prednisolone is but one of seven corticosteroids on the committee chart which are competing with one another. These charts and statistics prove beyond any doubt that the drug industry is one that has long embraced the concept of total competition.

BUSINESS CHANGES

REED MEDWAY SACKS, LTD., is the name by which Medway Paper Sacks, Ltd. (a company in the Reed Paper group) is now known. The address is unchanged, Larkfield, Maidstone, Kent.

SCHIMMEL & CO., INC., U.S.A., are moving their office and plant to Newburgh, New York, where the company's new building has just been completed.

Appointments

EVANS MEDICAL, LTD., have appointed Mr. J. S. Robison sales manager of their London house at Ruislip, Middlesex. Mr. Robison was for a number of years managing director of Evans Medical (India) Private, Ltd., in India.

IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

ASKED by Mr. M. LIPTON, on May 9, if he proposed to introduce legislation to enable private patients to obtain medicines by prescription under the National Health Service, Mr. DEREK WALKER-SMITH (Minister of Health) stated he had nothing to add to previous replies to recent questions on the subject.

Cosmetics

MRS. J. S. BUTLER asked the MINISTER OF HEALTH on May 9 what consideration he had given to the amendment of food and drugs legislation in order to control the sale of cosmetics. Mr. DEREK WALKER-SMITH said that an amendment to existing legislation would be considered if it were shown to be needed to avoid a risk to health; but on present evidence he was not convinced that such a need existed. MRS. BUTLER: "In view of the fact that various skin troubles and other difficulties follow the use of unsatisfactory cosmetics and that the Institute of Weights and Measures Administration, whose members have an unrivalled knowledge of consumer protection, has recommended control in this country similar to that in the United States and Canada," would the Minister study the evidence available to him with a view to bringing in amending legislation at an early date if the evidence showed it to be necessary? Mr. DEREK WALKER-SMITH indicated his willingness to consider any evidence which might be available. But he would have to be satisfied on health grounds that a genuine reason existed before imposing control. DR. E. SUMMERSKILL asked if the Minister's scientific advisers rejected the view held by scientists in America that certain lipsticks had carcinogenic properties. Mr. DEREK WALKER-SMITH replied that he was advised the general medical view was

that when used as an external application in very small doses "these things" had very little, if any, injurious effects on users.

Dental Research

The current annual expenditure on dental research by the Medical Research Council amounted to more than £35,000 Mr. DEREK WALKER-SMITH told Mr. L. A. PAVITT on May 9. Of the total annual expenditure by University Dentistry Departments amounting to £750,000 at least one-quarter may also be said to be spent on research.

Prescriptions for Private Patients

Mr. DEREK WALKER-SMITH informed CAPTAIN H. B. KERBY in a written reply on May 9 that he had no reason to suppose that National Health Service doctors were frequently copying out, on National Health Service forms, prescriptions issued by other general practitioners, who were treating the patients privately.

Salk Vaccine

Mr. M. EDELMAN asked the Minister of Health which United States firms with subsidiary companies in Great Britain were at present being charged before the Senate Anti-Monopoly Subcommittee with having created public hardship by the monopolist control of prices for Salk vaccine; and what inquiries he had made into the incidence of comparable practices by those firms in the United Kingdom. In a written reply on May 9, Mr. DEREK WALKER-SMITH said that so far as he was aware no charges relating specifically to the price of Salk vaccine had been made before the Senate subcommittee. Five manufacturers of Salk vaccine were recently charged with price fixing by the Federal Government in the courts but he understood the charge had been dismissed.

Freedom—Discipline—Legal Sanctions

FRANCO-BRITISH DISCUSSIONS ON PRINCIPLES AND TRENDS

SUBJECT of the eighth Franco-British Pharmaceutical Congress, held at Nice, Cote d'Azur, May 6-8, was "The conflict between individual freedom and professional discipline." The subject was debated at a Saturday morning session at which the opening speakers were Mr. H. S. Grainger for Great Britain and M. Georges Dillemann for France.

Between seventy and eighty British pharmacists flew to the Congress by chartered aeroplane from Manston aerodrome in Kent. Others found their own way to Nice. Approximately the same number of French members took part in the Congress.

Opening the discussion under the chairmanship of Mr. W. J. Tristram, Mr. H. S. GRAINGER pointed out that French and British alike expressed a great love of freedom, though their notions of what it was differed markedly in detail. The great aspirations of the United Nations—freedom from want, freedom from fear, etc.—only touched the fringe. "Freedom is a spiritual quality, an experience, a dimension of the human soul, an attitude to life."

Such a positive freedom must be sought in community, since no one could live entirely to himself without becoming a slave to himself and attempting to make slaves of others. The pharmacist had chosen to serve the sick by providing the means of alleviating their disease. He did it for the most part through commercial transactions. How could he find and maintain positive freedom, living as he did in a world where, at best, ignorance, and at worst, gross self-interest, marred human relations? The papers circulated defined three aspects:—

PERSONAL CONSCIENCE was rightly put first, because without it no rule of law could be really effective.

COLLECTIVE CONSCIENCE, or ethics, conveyed the idea of instruction of the individual conscience through a group.

SANCTIONS OF LAW were really an extension of ethics. They were the publicly expressed conscience of the whole community. The danger of legal sanctions was that, in some circumstances, the law became oppressive, removing the possibility of individual discretion.

The pharmacist, having special knowledge, must exercise it in the interest of the patient or customer, even when he did so to his own financial disadvantage. He must, for example, withhold to children the sale of chemicals for explosives. He must exercise care in labelling of containers. And he must give verbal advice to customers on the medicines they bought.

As a group, pharmacists agreed to act according to a code—first in the public interest, and secondly to maintain the dignity of the profession. For example, they agreed not to sell certain medicines, such as drugs acting on the central nervous system, except under safeguards. They also must refrain from activities injurious to colleagues or to the good esteem of the profession. In Britain there were two organs of professional discipline—the Ethical Committee of the Pharmaceutical Society; and the Statutory Committee, comprising five pharmacists under a lawyer as chairman.

Where it was in the public interest to govern certain activities by law (sale of poisons, registration of pharmacists, etc.), the initiative should come from the profession itself, as had happened recently in the poisons law changes in Great Britain.

Freedom could not be separated from responsibility and discipline. Transactions in business could not be separated

from profound concepts of morality. "He who would be the greatest must be the servant."

The theme of M. GEORGES DILLEMANN (professor of legislation, professional ethics and pharmaceutical history, Paris faculty of pharmacy) was that public esteem and the dignity of a profession depended upon its having independence, of which French pharmacy had lost much to the State. He said (the version is shortened):—

It is difficult to define all forms of liberty in a single formula. In the sense envisaged for the discussion freedom is roughly a man's ability to do what he wants, restricted only by his own will. But the individual conscience is supported by principles of morality and limited by the rights of others. In the "Rights of Man," liberty is defined as "being able to do all that does not harm another." The State's rôle is to decide what restrictions must be applied to individual liberties in the common interest. In pharmacy the common good is the public health. Pharmacy is essentially the art of preparing medicines and putting them at the disposal of the public. But drugs are often toxic, and instead of curing can sometimes kill. Three conceptions are possible. The individual conscience may be left as the sole arbiter of individual liberty. Or pharmacists may be governed by a professional conscience and subject to its discipline. Or regulations may be imposed by the State and enforced by disciplinary tribunals. Various systems can be envisaged according to whether those three factors impose themselves or not, and according to what weight their intervention has. Before the 1939-45 war the system in France involved little State intervention, and individual liberty played an

important part, limited only by professional standards. That system has been in decline to a degree which professional organisations—numerous and voluntary—had been powerless to arrest.

(To be concluded)

Soixante-quatorze pharmaciens britanniques qui sont venus à Nice par avion spécial photographiés lors de leur débarquement à l'aéroport. Des autres sont arrivés par leurs propres moyens.

Seventy-four pharmacists who went from Britain by charter plane photographed on arrival at the airport at Nice. Others travelled independently.

[Photo, Dognibène, Nice.



Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Not Scheduled

SIR,—In "N.P.U. Guide to the Poisons Rules 1960" (circulated on May 6) Okasa tablets were wrongly described as "P.I. S.4B." The formula of the tablets was changed when Roberts Chemists (Bond Street), Ltd., took over distribution. Since then, the sale of the tablets has not been subject to control under the Poisons Rules.

J. WRIGHT, *Deputy secretary*

Support for Candidates

SIR,—The Reigate, Redhill and District Branch of the Pharmaceutical Society has learned with great satisfaction that one of its leading members, Mr. A. R. G. Chamings, has allowed his name to go forward as a candidate for

the forthcoming Council elections. Mr. Chamings, as many readers will know, is employed in a senior capacity in the pharmaceutical manufacturing industry and has shown over the past years a great interest in branch affairs. He has definite views on the educational standards of future pharmacists, and he has been an advocate of greater remuneration for hospital pharmacists, having expressed his views on that subject recently in the daily Press. We as a branch consider that he has admirable qualities fitting him as a future member of the Council of the Pharmaceutical Society of Great Britain and we would ask for support in his candidature.

K. HAMPSON, *Secretary*,
Whyteleafe

SIR,—The pages of candidates' careers and policies (*C. & D.*, April 30, pp. 502-04, and May 7, p. 536) make interesting reading, but one wonders how many of the ideas and good intentions will in fact be carried into the Council chamber. This year the Romford and District Branch is honoured to sponsor one candidate whom they know by long experience to be a man who never shirks difficulties and frustrations, and who has every intention of taking his ideas—and those of his Branch—to the ultimate practical end. The Council needs single-minded men of courage, and we believe that in Ken Holland that ideal will be realised.

L. G. MINTER, *Chairman*,
Hornchurch

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN NO MORE D.B.A. EXAMINATIONS

Spanish pharmacy honours Sir Hugh Linstead

THE announcement that there were to be no further examinations for the Diploma in Biochemical Analysis was made by Mr. C. W. MAPLETHORPE when he replied to a question by Mr. T. HESELTINE at the monthly meeting of the Council of the Pharmaceutical Society of Great Britain in London on May 3 and 4. It was reported that, at the April examination for the diploma, there had been only one candidate (Mr. Graham William O'Neil), and that he had satisfied the examiners.

The Council agreed to send a letter to the Executive of the Scottish Department expressing appreciation of the excellent arrangements made for the April meeting of Council held in Edinburgh, and conveying congratulations to Dr. Macmorran (resident secretary).

The Council congratulated Sir Hugh Linstead on the recent award to him by the general council of the Pharmaceutical Colleges of Spain of a gold medal in recognition of his services to Spanish pharmacy as president of the International Pharmaceutical Federation. The medal was presented by Senor Garcia Ortiz (president of the general council) at a private dinner party arranged by the society at the House of Commons, at which Mr. T. Reid presided.

The registrar reported that Sir David Cairns, Q.C. (chairman of the Statutory Committee) had broken a leg, and would be unable to fulfil his duties for the time being. The Privy Council had appointed Mr. Edgar Stewart Fay, Q.C., to take his place for three months. It was agreed to send Sir David a letter of sympathy and good wishes.

The Council decided to send to Professor W. H. Linnell (dean of the School of Pharmacy, University of London) a letter congratulating him upon the proceedings at the opening of the school by Queen Elizabeth the Queen Mother on April 27. The Council noted with pleasure the appreciative references made to the part which the Society had played in the history of the school and to pharmaceutical education generally.

The Education Committee reported that Mrs. G. M. Dagnall had been unable to accept the invitation to act as invigilator at the Sunderland examination centre, and that the deputy invigilator, who had been seriously ill, would also be unable to act for the summer examinations. The Council accepted the Committee's recommendation to ask Mr. C. Jenner to invigilate the examinations in question.

The Education Committee received a report on the meeting of heads of schools of pharmacy held on April 11 to

discuss section K of the teachers' syllabus for Pharmaceutics III. An article was being published describing the ground to be covered in that section, which contained material of a kind not previously included in the examination syllabus and was in effect an introduction to the practice of pharmacy. A copy of the article would be sent to each branch secretary.

It was reported that the short course for lecturers in pharmaceutical subjects held at the College of Aeronautics, Cranfield, Beds, April 19-22, had been attended by ninety-nine teachers—seventy from technical schools and twenty-nine from university schools.

Several applications had been received from students who wished to transfer from degree to diploma courses and to sit Part I of the Qualifying examination in 1960. The Council approved the Committee's recommendation that, subject to the applicants being registered as "student" and submitting the required statement from the head of the school, they should be admitted to Part I of the Qualifying examination in September. A similar application from a student unable to obtain until the autumn of 1961 a place for Part II in the school of pharmacy nearest to him, and wishing to commence one year's practical training in the meantime, was also considered. It was agreed to allow the applicant to enter for Part I in September, and thereafter to begin one year's practical training. Two further applications from students without the basic educational requirements for registration as "student" were not accepted.

Reports on the Intermediate examination held in April were received. In England and Wales there were twenty-two first entrants, of whom ten passed, eight were referred and four failed. Of twenty re-entrants, six passed, two were referred, eleven failed, and one was absent. For a referred subject there were twenty-nine entrants, of whom fourteen passed and one was absent. In Scotland the only first entrant failed. Of ten re-entrants one passed, seven failed, and two were absent. For a referred subject there were fifteen entries and seven passed. In the Entrance examination held in March, twenty-five candidates had entered—one for the whole examination, two for two subjects, and twenty-two for one subject. In biology there were six entrants, of whom five passed; in chemistry six entrants, of whom four passed and one was absent; and in physics eighteen entrants, of whom twelve passed and one was absent.

The Public Services Committee's report recalled that in

March the Council had supported the protest of the Guild of Public Pharmacists against certain particulars in the Draft N.H.S. (Superannuation) (Amendment) Regulations 1960, which were held to be to the detriment of long-service pharmacists. It was reported that later information had been received from the Ministry showing that account had been taken of the representation made to them, and that the problems had been satisfactorily resolved.

Further activity by the Ministry with regard to the establishment of central sterilisation departments was reported. It was agreed to ask the Ministry for a further meeting to discuss the Ministry's opinion and action in that connection.

Dr. J. M. Rowson is being invited to serve as a member of the Codex Revision Committee and the Advisory Committee to the Department of Pharmaceutical Sciences.

It was reported that the four-year term of office of Mr. J. C. Bloomfield, the Society's representative on the committee of management of the Chelsea Physic Garden, would expire on June 7. The Council approved a recommendation to reappoint Mr. Bloomfield.

The receipt was reported of a letter from the Royal Society calling attention to its tercentenary celebrations to be held July 18-26, and inviting the attendance of the president of the Society at a formal ceremony on July 19.

The Law Committee's report showed that in March the Society's inspectors and agents visited 1,275 authorised sellers, 301 listed sellers, and 590 drug-store proprietors and similar traders. Eighteen cases of alleged infringements under the Pharmacy and Poisons Act, 1933, Pharmacy Act, 1954, and Pharmacy and Medicines Act, 1941, were considered, and appropriate action taken.

Eleven former members of the Society, having paid the necessary fees and penalties, had been restored to the Register. The Council approved a recommendation to re-

store four persons whose names were removed from the Register more than ten years ago. On the Committee's recommendation, it was agreed to add to the Register the names of two applicants for reciprocal registration under Section XIX (14) of the Society's by-laws and the names of six applicants under Section XIX (16). Authority was given for the reciprocal registration of two further applicants on submission of the required documents and payment of the prescribed fees. One application was deferred.

The Benevolent Fund and War Aid Committee's report showed that grants amounting to £242 had been made to four widows, two members and a dependant of a member. Recommendations for grants amounting to £292 to three other members were approved. One application for assistance was deferred, and at the chairman's request the decision in another case was referred back to the committee.

It was reported that the late Mr. Joseph Henry Williams, Herne Bay, had left the whole of his estate to the Benevolent Fund; the amount was expected to be in the region of £1,000.

During the month to April 16, thirty-three guests had stayed at the Birdsgrove House for an aggregate of forty-three and a half weeks, against thirty-two guests and forty-three weeks in the corresponding month a year ago. In the three months to the same date, the number of guests at midweek ranged from five to eleven, representing an average of seven or eight.

It was reported that a bed of 100 rose bushes of four different varieties had been planted at Birdsgrove House in memory of Mr. A. J. Plowright.

MR. HESELTINE called special attention to a contribution of nearly £201 by the Hull Chemists' Association and Branch to the Benevolent Fund, describing it as "a magnificent effort."

PHARMACEUTICAL SOCIETY FINANCES

BALANCE SHEET AT DECEMBER 31, 1959

	Total 1959	Total 1958		Total 1959	Total 1958
	£	£		£	£
ASSETS			DEDUCT LIABILITIES		
Investments, at cost or as valued at date of receipt—			Creditors and amounts received in advance	75,080	63,163
Freehold property and ground rents ...	392,939	379,531			
Stocks and shares ...	246,517	231,687	NET ASSETS, representing endowment and accumulated funds as below ...	797,933	729,709
Redemption policies, at approximate surrender value ...	13,000	12,000			
Motor cars, at cost ... £10,670			ENDOWMENT AND ACCUMULATED FUNDS		
Less; Depreciation ... 3,930			Endowment funds ...	120,325	120,224
	6,740	6,140	Accumulated income funds ...	130,495	119,067
Stock of publications and paper ...	18,460	15,602	Other accumulated funds ...	515,113	458,418
Debtors, prepayments and income tax recoverable ...	84,790	56,565	General reserve ...	32,000	32,000
Treasury bills, at cost and local authority loans ...	104,569	74,713		797,933	729,709
Balances with bankers and cash in hand...	5,998	16,634			
Loan from premises fund to general fund	—	—			
	873,013	792,872			
EXPENDITURE			INCOME		
	£	£		£	£
EDUCATION			Examination fees ...	23,716	24,327
Examinations ...	24,328	21,452	Students' registration fees ...	895	2,167
Library ...	5,601	5,402		24,611	26,494
Museum ...	8,518	1,823			
Pharmaceutical Trust :—			Pharmaceutical Trust :—		
Contributions (gross) under deeds of covenant ...	17,391	17,391	Grant towards expenses incurred in maintaining Society's charities ...	17,456	17,591
Educational grants, scholarships and sundries ...	9,534	16,178		42,067	
<i>carry forward</i>			<i>carry forward</i>		
	65,372	62,246			

	£	£	£		£	£	£
<i>Brought Forward</i>		65,372	62,246	<i>Brought Forward</i>		42,067	44,085
ADMINISTRATION OF PHARMACY ACTS							
Registers :—				Sale of Register and sundry fees received		5,139	5,144
Maintenance (salaries and expenses)	7,302		7,375				
Publication	2,474		2,034				
Inspectors' and agents' salaries and expenses	16,963		17,025				
Prosecutions and legal charges, including Statutory Committee's expenses	3,064		2,530				
		29,803	28,964				
BRANCH ORGANISATION							
Grants to branches	8,615		6,138				
Representatives' meetings, conference and other expenses	10,807		10,287				
		19,422	16,425				
PUBLICATIONS				<i>The Pharmaceutical Journal</i> (Income less cost)	7,818		
<i>Pharmaceutical Journal</i> (cost less income)	—		8,374	Other publications (sales)	85,784		
Other publications (cost)	66,555		67,030			93,602	90,862
		66,555	75,404				
GENERAL ADMINISTRATION				Members' fees	130,626		93,327
Maintenance of premises	24,344		23,245	Premises' fees	48,526		48,744
Office salaries and expenses	47,885		50,804	Income from investments, including interest on Treasury bills and bank deposits	3,984		2,479
Staff superannuation fund (including special contribution of £7,500) and pensions	16,799		19,130			323,944	284,641
Travelling and other expenses of members of Council and Scottish Executive	7,197		6,258				
		96,225	99,437				
Subscriptions to other bodies and sundries	2,843		—				
		2,843	2,705				
		280,220	285,181				
Surplus for the year transferred to Accumulated Fund		43,724	—	Deficit for the year, transferred from accumulated fund		—	540
		323,944	285,181			323,944	285,181

SPECIAL, CHARITABLE AND TRUST FUNDS: INCOME AND EXPENDITURE ACCOUNTS

	Funds for special purposes			Charitable funds						Trust Funds
	Premises	Parliamentary	Conference Entertainment	Benevolent (i) General War Aid	Benevolent (ii) War Aid	Birds-grove House	Hills Orphan	Orphan	Emergency	
INCOME	£	£	£	£	£	£	£	£	£	£
Subscriptions and donations	—	438	—	7,957	—	2,686	—	1,303	—	—
Income under deeds of covenant	—	—	—	1,976	—	921	—	30	—	—
Income from investments, Treasury bills, Local authority loans and bank deposits	18,374	180	59	6,530	375	26	533	714	92	1,478
Legacies	—	—	—	2,772	—	—	—	50	—	—
Grants from General Fund	—	—	—	—	—	—	—	—	—	3,275
Grant from Benevolent Fund to Birds-grove House Fund	—	—	—	—5,000	—	5,000	—	—	—	—
Miscellaneous, income, including Birds-grove House guests' contributions	—	—	—	—	—	1,619	—	—	—	2,125
TOTAL INCOME	18,374	618	59	14,235	375	10,252	533	2,097	92	6,878
LESS EXPENDITURE										
Grants and annuities	—	270	—	11,574	722	—	—	946	326	4,964
Maintenance expenses	—	—	—	—	—	10,502	—	—	—	—
Improvements to head office building	781	—	—	—	—	—	—	—	—	—
	781	270	—	11,574	722	10,502	—	946	326	4,964
TRANSFERS to (or from) Accumulated Funds: being surplus income (or deficits) for the year	17,593	348	59	2,661	—347	—250	533	1,151	—234	1,914



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Pensions for Employees

THE National Insurance Act, 1959, introduces into the National Insurance scheme a measure of graduated contributions and retirement pensions related to employees' earnings, and it is planned to start the collection of graduated contributions in April 1961.

Under the scheme there is to be a minimum contribution covering all the earnings of an employee up to £9 a week—for the flat rate pensions and benefits. Those earning over £9 a week, and their employers, will also pay a graduated contribution—a percentage of earnings over £9 and up to £15 a week—and qualify for an addition to their retirement pension depending on the amount of graduated contributions paid. Those who are self-employed will not pay graduated contributions, nor will they earn a graduated addition to their pension. The flat-rate pension is to remain as at present (£4 per week for a married couple, commencing when the husband is sixty-five; or £2 10s. a week for a single person commencing for a man at age sixty-five and for a woman at age sixty). The graduated pension is related to the contributions paid. A male employee earning £15 per week and retiring at sixty-five after thirty years' contributory membership would receive just over 26s. a week.

The contributions are to be collected in association with P.A.Y.E. income tax, and the minimum, which includes National Health Service and Industrial Injuries contributions, is 15s. 4d. for an employed man and 13s. 4d. for a woman, the employer's contributions being 7s. and 6s. 4d. respectively. In addition, employers and employees are required to contribute equally towards the graduated contribution of 8½ per cent. on the employee's weekly earnings in excess of £9 up to a maximum excess of £6.

A unique aspect of the scheme is that which allows an employer to "contract out" of the graduated benefits of the State scheme. "Contracted-out" employees and their employers are to pay the present flat-rate contributions (for males 9s. 11d. by the employee and 8s. 3d. by the employer) that will yield the present flat-rate pensions and benefits.

The Act makes it incumbent upon employers to provide graduated pensions for all their employees over eighteen years of age and earning more than £9 a week.

The graduated pension may be provided through the State scheme or by means of a pension scheme arranged by the employer. If the employer decides to operate his own scheme he "contracts out" of the graduated part of the State scheme but he must satisfy the authorities

as to the financial soundness of his scheme and must provide the employees with retirement pensions no less than the maximum granted under the State scheme; furthermore the employees' pension rights must be preserved should the employee leave his job.

The employer may, if he wishes, "contract out" for some sections of his employees, leaving the remainder to be wholly provided for by the State scheme. Any employer who thinks of "contracting-out" should get in touch as soon as possible with the Registrar of Non-Participating Employments, 10 John Adam Street, London, W.C.2.

Financially, the effect upon employers depends upon the level of wages paid. Where a high proportion of the male staff earn more than £11 a week, then the total amount payable by the employer is increased if the employees are included in the State scheme. In certain circumstances the pension that could be obtained under a private scheme may cost less than that obtained by the State graduated payments, and to obtain a balanced view of the problems the aid of a specialist in pension matters should be sought. However, an introduction to the subject may be gained by a study of the various Government publications, available from the offices of the Ministry of Pensions and National Insurance.

Penalties for Tax Form Errors

THE penalty for making an incorrect return for income tax, is, when proceedings are taken by the tax authorities in a court of law, £20 plus treble the tax "which ought to be charged." That has been the situation for some time, but the interpretation of the phrase in quotation marks has occasioned some divergence of views. The House of Lords has now decided, in the case of *Inland Revenue v. Hinchy*, that it means treble the tax on the amount to which the taxpayer was directly assessable for the year in question (not treble the amount which, owing to his defective return, he had been charged).

The new interpretation could have had startling results if the Revenue authorities sought to impose the full penalty. For example, if a return were incorrect by even so small a sum as £1, the taxpayer might be liable to forfeit, in addition to the £20, three times the whole of the tax to which he was directly assessable for that year. In other words, if a trader was assessed on the sum of £1,000 in respect of the profits of his business, but had omitted in his return to include a profit he derived from some other activity, the penalty which the Revenue could have exacted from him would have been not £20 plus three times the amount (say £5) by which that profit would have increased his tax, but £20 plus 3 × £1,005, a total of £3,035.

The state of the tax law in relation to penalties has been extremely unsatisfactory. Reform of the law was recommended both in the reports of the Income Tax Codification Committee and in the final report of the latest Royal Commissions on Income Tax, but those recommendations fell on deaf ears, until the Hinchy decision stirred up the authorities.

The Finance Bill at long last contains elaborate provisions for improvement of the law. The Hinchy decision, moreover, is not to be allowed to stand. It would appear that the penalty is now to be £20 plus three times the amount of the extra tax that could have been assessed if a normal return had been made.

STATUTORY COMMITTEE

A "serious case" adjourned for pharmacist to attend

A CASE before the Statutory Committee, meeting in London on May 4 was regarded as so serious that it was adjourned in order that the pharmacist concerned might have a further opportunity of appearing before the Committee to speak in mitigation or explanation of his conduct. The Committee was inquiring into information from which it appeared that a pharmacist had caused wilful damage to dentures, the property of another man, to the amount of £4 5s. (to that offence he had pleaded guilty and had been fined £2 or one month's imprisonment in default and in addition was ordered to pay £4 5s. damages); that he had pleaded guilty to having been drunk and disorderly (for which he was fined £1 or seven days' imprisonment in default); that he had inflicted grievous bodily harm (to which offence he had pleaded guilty and was fined £10 or two months' imprisonment in default and ordered to pay £3 16s. costs); and that he had assaulted a police constable then acting in the execution of his duty (to which offence the pharmacist pleaded guilty and was fined £5 or one month's imprisonment in default). The pharmacist did not appear at the Statutory Committee hearing and was not represented.

Chairman Welcomed

MR. A. C. CASTLE (solicitor, appearing to present the facts to the Committee) before opening the hearing, welcomed Mr. Edgar Fay, Q.C., who presided in the absence of Sir David Cairns. MR. FAY, thanking Mr. Castle, said that he hoped to "keep the seat warm" until Sir David was restored to full health.

MR. CASTLE said he had the "good fortune to have present the police officer directly concerned with the case." The pharmacist had appeared in court on four charges all of which related to one incident. On the evening of February 4, a man of sixty-seven years had been standing on a canal bridge when the pharmacist concerned had come up to him and said: "You are the man I am looking for." The man had never seen the pharmacist before, and said "I do not know you." Without any warning the pharmacist had then struck the man in the face and knocked him to the ground, and then said "You are a copper's nark" and proceeded to kick the man in the face while the man was on the ground, injuring him severely. A woman saw what had happened and heard the pharmacist's remarks to the injured man. She fetched the licensee of a near-by public house, who had the injured man taken into his living room.

When a policeman (who was present at the hearing on May 4) asked the pharmacist for his name and address, he formed the opinion that the man was under the influence of drink and noticed that he had blood on his right hand. At first the pharmacist refused to divulge the information requested, and after swearing at the policeman

added that he was going home. Another policeman was called and the pharmacist was arrested. The morning afterwards, when the pharmacist was sobered, his general attitude changed. He pleaded guilty before the magistrates and was fined a total of £18 and costs.

"Domestic Trouble"

Mr. Castle went on to give details of the pharmacist's "history." He had qualified in 1948 and, after having done a considerable amount of locum work, had opened his own business in Scotland but, owing mainly to the closing of a nearby mine, the business failed and the pharmacist went to live in Edinburgh. The police officer would tell the Committee that the pharmacist had had a lot of domestic trouble that had led to his drinking.

The police constable said that the assaulted man, when he first saw him, was suffering from "very severe facial injuries." The policeman produced a photograph taken after the injured man had received hospital treatment, and it was passed to the Committee. Just before the injured man was removed to hospital, the pharmacist was brought into the living room and the injured man said: "He was the man who did it," pointing to the pharmacist. The constable twice asked the pharmacist for his name and address but he refused the information, after the second question adopting an aggressive attitude. He forced his way outside, where the constable again asked for his name and address. The pharmacist swore at the constable and said that he was going home. "He adopted a fighting attitude and hit me twice in the chest, and a third blow knocked my helmet off." The constable told the pharmacist that he was going to arrest him for being drunk and disorderly, but the pharmacist became so violent that the constable could not arrest him and had to summon help. Another constable came along and the two of them got the pharmacist to a police station.

The constable agreed with Mr. Castle that the injured man and the pharmacist were complete strangers to one another. MR. CASTLE then asked if there were any suggestion that it was a case of mistaken identity. POLICE CONSTABLE: "No. He [the pharmacist] just said that he was intoxicated." The pharmacist had given no other explanation for his conduct. In reply to a question from the chairman the constable said that in January the sale by warrant of the pharmacist's shop had taken place and it was understood that he owed sums of money to various people in connection with the business. There had been considerable domestic strife between the pharmacist and his wife and it was understood that they were now divorced. The pharmacist had begun to drink heavily and his business suffered as a result and he got into debt.

MR. CASTLE: In this case there is a previous history that is known.

THE CHAIRMAN: I am wondering how much further we ought to go without making efforts to get the accused here as there are such serious aspects. . . . I think we ought to do this in order, and so that we may do so the Committee announces that it finds proved the convictions which were the cause of this inquiry. We therefore ask you to give any evidence as to the man's character that will help the Committee.

It was then disclosed that, after conviction for a breach of the peace and assault in July 1954, a letter had been sent to the pharmacist on Sir David Cairns's instructions. Then, in May 1955, the pharmacist had been fined 10s. for drunkenness; in August 1955 he had been fined £3 for misbehaviour on "a piece of public transport"; in July 1956 he had been fined £25 and disqualified from driving for two years for driving a motor vehicle under the influence of drink or drugs; in July 1958 he was fined £5 for driving a motor vehicle while uninsured and £3 for driving while unlicensed; and he was fined £5 in October 1959 for a breach of the peace. After the offence in July 1954 a letter of warning was sent to the pharmacist by the secretary to the Committee and a second, "severe," warning was sent in connection with the offence of driving under the influence of drink or drugs.

Committee's Decision

After retiring, THE CHAIRMAN announced: "The Committee regard this as a serious case; so serious that we regret greatly that Mr. X [the pharmacist] has not seen fit to attend. We feel he knew full well of the sitting. In view of the gravity we attach to the conduct we have found established we are unwilling to reach a final decision without giving Mr. X the opportunity to come here and say anything to us, or have it said by a representative on his behalf, in mitigation or with a view to influencing us in our decision. We therefore intend adjourning this case to our next meeting and we shall instruct the secretary to transmit to Mr. X intimation of this, and of the view we have formed that in his own interest he should attend, together with an intimation that it is unlikely he will be given any further opportunity if he does not take this one."

The Committee also adjourned to its next meeting an inquiry from which it appeared that a member of the Society had been convicted on a charge of embezzlement. In another resumed inquiry a direction was made that the Committee was satisfied with the explanations given by a pharmacist of his conduct since he was released from prison after having served a sentence of twelve months for unlawfully and maliciously setting fire to material in a building. The Committee was also satisfied with the letters which had been produced from the pharmacist's employers and accordingly directed that no further action should be taken in the case.

STUDENT BODY NOT TO DISBAND

Annual conference thwarts the attempt

AN abortive attempt to disband the British Pharmaceutical Students' Association was made at the Association's annual conference at Sunderland, April 19-23.

The attempt was in the form of a motion: "That B.P.S.A. should be disbanded and the National Union of Students requested to make a vice-president responsible for the needs of pharmacy students and a working party be set up to consider the needs of pharmacy students, the working party to be elected at an annual conference for the pharmacy colleges." The resolution came from Sunderland students, and proved the climax of two days' considerable criticism of the Association's executive, who were under fire for failing, according to their critics, to keep colleges informed of their activities. One result of the criticism was that a committee was set up to investigate the workings of the executive committee, with a brief to report back to the next annual conference.

"A Test" of the Association

MR. A. H. FOSTER, Sunderland, moving the resolution, said that it was put forward to "test" the Association. "At the beginning of this year when I became chairman of the Sunderland branch of B.P.S.A. I was trying to sell individual membership, and the question I was most frequently asked was 'What does B.P.S.A. do for us?' It was difficult to give an answer: in fact I still do not know the answer! I do not believe, and neither does my branch, that the Association does anything for us. The chairman has already admitted that we are not strong enough to influence the Pharmaceutical Society. If we have no influence, there is no point in our existing. We can find nothing the Association has done for us except organise the annual conference, and I suggest that to organise a four-day conference to discuss thirteen resolutions is ridiculous. I think that thirteen resolutions is indicative of the attention being paid by students in this country to the Association. We think it is a waste of time having a film show, going on works visits, and having a lecture during the conference. Such events can be arranged by local branches of the Association. The thirteen resolutions could be dealt with just as well at a two-day conference."

Mr. Foster went on to explain that Sunderland students had decided that the reasons the Association was doing nothing for them were that there were not enough pharmacy students to warrant such an organisation, and that the executive was highly inefficient. "The individuals are not to blame. The main reason for the inefficiency is the actual composition of B.P.S.A. It is made up of members from all over the country—how can they act in a co-ordinated manner? We have no permanent staff, no central clearing-house for correspondence. The Association in its present form cannot function efficiently. If B.P.S.A. were disbanded, we want

pharmacy students to feel that they have another way of getting representation. It is our proposal that we should go to the National Union of Students and request them to make a vice-president responsible for the affairs of pharmacy. The working party that we envisage N.U.S. setting up would be responsible for the organisation of the annual conference. The National Union is strong. It is recognised by the Ministry of Education. It has the cream of the students and it has a paid staff. We think that that is a far better situation than obtains in B.P.S.A., and we think that the Union would be prepared to do what we ask, because they have, for technical college students, a similar working party to what we envisage."

MR. M. E. Q. JAMES, Sunderland, seconded. For the executive committee Mr. N. D. T. FERGUSSON, Bradford, opposed the motion. The mover had stated, he said, that the Association's chairman had confessed that the Association had no influence with the Pharmaceutical Society. In fact, the only thing in which the Association had not been able to influence the Society was the giving effect to a resolution from the previous year's conference "that, in view of this country's legal requirements in pharmacy, pharmacists from parts of the Commonwealth who are proposing to practise here under full reciprocal agreements should at least be required to take the forensic examination of the Pharmaceutical Society of Great Britain as do the United Kingdom university graduates." On all other matters the Society had listened most sympathetically and had always been most helpful. "Our membership is about 1,000, which is about 75-80 per cent. of pharmacy students in this country, and I believe is an indication of our strength. In regard to N.U.S., when I first read the motion I decided

to find out what our situation had been in the past. The B.P.S.A. was founded in 1942, and we then became affiliated to the Union. That continued until about 1954 when the Association seceded from N.U.S. We found that it was not worth the £3 3s. to be affiliated, because they did nothing at that time for pharmacy students. The whole point is that the proposer only thinks that N.U.S. *might* be able to do something for us. But it has been tried and it was found that the Union did not do so."

A Question of Influence

MR. J. HAYWARD, Nottingham, said that the Association should be allowed to continue, though not necessarily in its present form. "The Association is entirely concerned with pharmacy students. We do have influence with the Pharmaceutical Society, and they do listen to what we have to say. If possible they help us. What vice-president of the Union knows anything at all about the problems of pharmacy students? What would the working party do other than that which is already being done by the Association?" Mr. Hayward pointed out that the Pharmaceutical Society dealt personally with the president of the Association, but a vice-president of the National Union of Students would receive nothing like the same consideration from the Society. "They would treat him as an 'outsider'," asserted Mr. Hayward.

MR. A. J. BAILEY, Leicester, said that it was up to delegates, who were only a small minority of the members, to decide the Association's business, and it was then up to the executive committee to carry out those decisions. It was not the fault of the Association as a whole if "those things are lax" but rather it was the fault of the executive. "They have been completely inadequate in their work, and we have seen



The Association's executive (1959-60) seen at the conference venue before the week's work began.

in the past two days the fumbling way in which they have dealt with the business of this conference. I think that is what Sunderland is complaining about. If you vote in favour of this motion you are, in effect, giving a vote of 'no confidence' in yourselves as delegates." Mr. Bailey counselled against disbanding the Association, and urged delegates instead to work for the good of the Association to build it into a strong and businesslike organisation.

MR. R. MILLS, Chelsea, pointed out that in the past two years the Association had wiped out a deficit of £13 and built up a credit balance in the region of £200, mainly by obtaining grants from manufacturing chemists. Those companies would not be likely to be interested in supporting pharmacy students through the N.U.S., and a valuable point of contact would be lost.

MR. J. WYNNE ROBERTS, Cardiff (chairman of the Conference and treasurer of the Association) pointed out that the Pharmaceutical Society regarded B.P.S.A. as a branch of the Society and made a grant to it of £100. "The Society would, I think, frown on any approach made to it by the National Union of Students, even though N.U.S. might claim to be representing pharmacy students' interests."

The motion was lost, nine voting for and thirty-two against.

MR. S. L. CLEIN, Bristol, moved "That the Pharmaceutical Society should be asked to issue a more detailed examination syllabus for students." He explained that the proposal concerned the new three-year course, "and although we are only in our first year of that course, the syllabus we have been given is not worth having. It tells the student nothing about the course. Physiology is described as 'cardiovascular and respiratory systems, etc.', but no details are given. There are various other anomalies. Pharmacognosy gives no list of drugs, it just says 'common crude drugs.' We believe that a more detailed syllabus would assist students considerably to know what they are expected to learn." MISS R. E. MORRIS seconded the motion. Members of the executive were unanimous in their support of the motion, said MR. R. MILLS, Chelsea, and MR. CLEIN assured MR. TAY SUNG (the "Square"), that a more detailed syllabus was issued to lecturers by the Society. The motion was carried.

Extension of B.Pharm. Course?

In moving a resolution "That this conference considers that it is necessary to extend the three-year B.Pharm. (London) course to four years," MR. C. HART, Chelsea, pointed out that it had been passed at Chelsea by only a narrow majority after a lengthy discussion. Second-year students believed that a four-year course was necessary because of the numerous and rapid advances in the science of pharmacy, all of which had been added to the syllabus making a "cram" course necessary. Radioactivity had recently been added to the course, which meant a lot more work, but little had been left out to make up for the addition. Mr. Hart urged the conference to vote on the motion from a student point of

view "and not encumber yourselves by wondering whether London and other universities would be prepared to accept a four-year course without altering other degree courses, or whether the universities have the staff or the accommodation to cater for a four-year course." MR. H. JACOBS, Chelsea, seconded the motion. MR. M. HURRLE (the "Square"), said that members of the executive committee were unanimously in favour of the motion because they did not want the B.Pharm. to become just a "cram" course. "We want to go to university not just for a degree but also for a university education." MR. M. E. Q. JAMES, Sunderland, asked whether a four-year course would financially be possible in view of the attitude of some local authorities to the issuing of grants. MR. J. JAMES, Nottingham, said that the question of grants should not arise, because local authorities made grants of up to five years for medical students. If the pharmacy course were increased to four years they would pay accordingly.

In a college of further education, great importance must be attached to the development of intellect, said MR. A. J. BAILEY, Leicester, supporting. The motion, when put to the vote, was carried.

B.Pharm. and Forensic

The next motion, also from Chelsea, and also carried, stated: "That the Pharmaceutical Society should be requested to allow successful Part I B.Pharm. candidates to sit the Society's forensic examination in the following December, thereby enabling them to become full members of the Society on presentation of the proof of a degree and completed apprenticeship, and on payment of the appropriate fee at a later date." Proposing the motion, MR. HART said that it had been before previous conferences in various forms for the past two or three years. At first it had been suggested that the forensic examination taken by graduates should be abolished because B.Pharm. students took forensic pharmacy as part of their examination. However, the Society would not give up its rights as the examining body for pharmacy, and graduates had to take a further forensic examination before they could be admitted to membership of the Society. Another suggestion that had been made in the past had been that the forensic examination should be taken by degree students at the same time as their parts I or II examinations, but apparently that idea was not workable. As a compromise, Chelsea students believed that the resolution before the meeting was a feasible alternative. MR. JACOBS seconded. MR. W. DAWSON, Sunderland, said the executive thought that it was a good motion and supported it. B.Pharm students had a two-year course in forensic pharmacy, and the subject then lapsed for one year before having to be taken up again because of the Society's examination.

Surprisingly (in view of past support) the delegates defeated a Chelsea motion "That B.P.S.A. should renew its support for the Society in its endeavours to obtain a commissioned rank for

pharmacists in H.M. Forces." MR. JACOBS moving it, said that the motion had been supported by many recent conferences of the Association, and he hoped that delegates would again affirm their support of the Society's policy on the matter. MR. HART said he believed it more than ever necessary that pharmacists should have a commissioned rank because, with the abolition of National Service, it was essential that pharmacists should be attracted into the Forces to make a career. MR. R. MILLS, Chelsea, said that it was impossible for a pharmacist to become an officer in the Army at present. MR. BAILEY disagreed, pointing out that each case was judged on its merits. MR. FERGUSSON, opposing the motion, said that one of the objects of the Association was "the furtherance of the science of pharmacy and the maintenance of the status of pharmacy as a profession." The type of dispensing carried out in the Army did nothing for the maintenance of the status of the profession: it comprised handing out stock items of which the main cure-all appeared to be the No. 9 pill! The sergeant-dispensers were well able to carry out that type of dispensing, as they were directly under the control of the medical officer.

As it stood, the motion meant that all pharmacists in the Army should be given commissions, said MR. FOSTER. But other qualities, such as leadership, were demanded of officers. MR. J. M. W. VICARY, Leicester, said that, before going into the Royal Air Force, he had been advised by a member of the Society not to bother to go in for dispensing because the standard was so low that the position carried no status and was not worth bothering about. MR. JACOBS, replying to the debate, said he realised that the fact that someone was qualified as a pharmacist did not entitle them automatically to a commission. But it must be remembered that the pharmacist had undergone a specialised three-year training that brought him near to the attainments of the doctor. As for the "shoddy" dispensing, he believed that pharmacists had a duty to endeavour to improve the standard. The motion was defeated.

Other Motions

Other motions discussed by the conference were as follows:—

That a confidential assessment of each candidate for the Pharmaceutical Qualifying examination should be sent to the board of examiners from the schools of pharmacy of the candidates and used only in borderline cases (proposed by *Plymouth*; defeated);

That London University should accept the new three-year course as a substitute for the first two years of the degree course (proposed by *Plymouth*; defeated);

That the executive committee of B.P.S.A. is failing to implement fully the objects of the Association and in particular is neglecting the establishment of a permanent form of contact between the pharmacy departments of the universities and the colleges of Britain (*Liverpool*; carried);

That the executive should be directed to approach the N.P.U. and the large multiples with a view to obtaining discount

for B.P.S.A. members on production of a membership card (*Sunderland*; carried);

That the conference views with concern the lack of communication between the executive of B.P.S.A. and its constituent organisations, the lack of publication of B.P.S.A. affairs to its constituent organisations, and the apparent lack of co-ordination in the executive committee. This conference therefore reaffirms the resolution from Leicester in 1959 ["That the executive committee should provide members with more adequate information of their deliberations, achievements and aims"], at the same time drawing attention to chapter 2, para. E of the constitution. [Implementing decisions reached at the annual conference and investigating and undertaking action where necessary and preparing reports on questions otherwise suggested to the Association.] The conference directs that (1) a committee should be set up to investigate the workings of the executive, with the aim of procuring an efficient executive in the future; (2) a detailed balance sheet should be published every year and copies sent to each constituent organisation; (3) minutes of all executive meetings should be kept and copies of them sent out to all constituent organisations not less than twenty-one days after the meeting (*Sunderland*; carried);

That the minutes of the annual conference should be duplicated and circulated to the colleges not more than three months after the annual conference (*Sunderland*; carried);

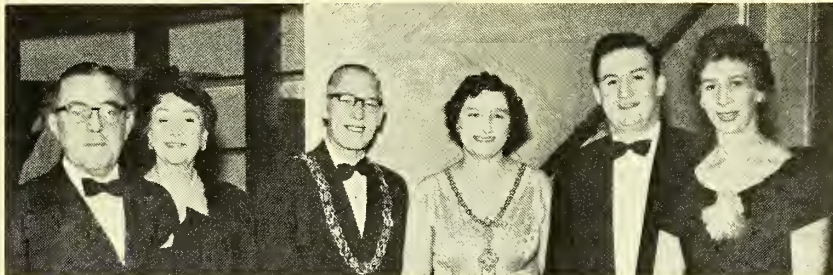
That the executive should request the Pharmaceutical Society to reveal the marks gained by candidates in examinations (*Sunderland*; defeated);

That the executive should request the Pharmaceutical Society to state a definite pass mark for examinations (*Sunderland*; defeated);

That B.P.S.A. should investigate the possibilities of organising a sports tournament on a regional basis (*Bristol*; carried).

Officers' Reports

MR. J. WYNNE ROBERTS, Cardiff (treasurer and acting chairman of the conference), in presenting the chairman's report, apologised on behalf of Mr. G. Faux (president) who had been forced for business reasons to resign early in the business year. Mr. Riddick (Welsh representative) was also unable to attend the conference owing to illness. "This year has been a difficult one for the executive. The loss of Mr. Faux was a real blow, but even so we have succeeded in completing the routine business of the executive, even if we have not done much in the way of advancing B.P.S.A. apart from increasing the membership, mainly due to Mr. Faux's early endeavours. In his first year as president, membership increased by 25 per cent., and in the past year it has increased by 50 per cent. In 1959 a Liverpool delegate was elected membership secretary of the Association, but since nothing has been heard from her, Mr. Hurrell and myself have had to cope with the job. At the beginning of the year we had no editor for the *Future Pharmacist*, and it was not until nearly mid-way through the year that we succeeded in persuading (or coercing) Mr. John Hayward, Nottingham, to take over the post. We hope the next



Chief guests at the dinner seen with the Association's chief officers: Mr. and Mrs. Kent, the mayor and mayoress, Mr. J. Wynne Roberts (conference chairman) and Miss Janet Peck (secretary).

edition will be out just after this conference." Mr. Roberts paid tribute to the work of the Sunderland committee, under Mr. Foster, for their arrangements for the conference. In the past, lack of money had hampered the Association's efforts on behalf of students, but during the past two years letters of appeal and increased membership had resulted in the Association's credit balance going up to more than £200. With that capital behind them, the Association should be able to cope more effectively with problems presented to it.

MR. N. D. T. FERGUSSON, Bradford, said that he had been elected secretary at the previous year's conference but had had to relinquish the post after Christmas owing to pressure of work. Miss Janet Peck had taken over from him. A second appeal for donations had been sent out to those manufacturers who had not contributed to the first appeal, and four companies had sent in a total of £26 5s. Later, the companies that had made an original donation were again approached, and eleven of them had contributed a further total of £110 to the Association's funds.

MR. ROBERTS presented the treasurer's report and balance sheet, and MISS A. SAVAGE reported on the activities of the International Pharmaceutical Students' Federation.

New Officers

The following officers were elected for 1960-61: *President*, Mr. A. J. Bailey, Leicester; *Secretary*, Miss Janet Peck, Bradford; *Treasurer*, Mr. J. Wynne Roberts, Cardiff; *Executive*, Messrs. A. Foster and J. M. W. Vicary, Leicester; *Scottish Representative*, Mr. J. Burr, Aberdeen; *Welsh Representative*, Mr. I. Phillips, Cardiff. As I.P.S.F. liaison secretary Miss A. Savage continues in office, having been elected in 1959 for a two-year period. The following were elected to the committee appointed to investigate the workings of the executive: Messrs. P. Hughes, Liverpool, W. Dawson, Sunderland, and S. L. Klein, Bristol. It was agreed that the president should act as chairman of the investigating committee.

More than forty delegates attended the conference. They were received on the evening of their arrival by the mayor of Sunderland (Alderman N. L. Allison) and the mayoress, and afterwards there were a dance and buffet supper. During the week there were a lecture and film show by a representative of Kodak, Ltd.; visits to Abbott Laboratories, Ltd., Jarrow, and the Pyrex glassworks; a theatre visit; and a lecture on "Pharmacology and the

Pharmacist" by Mr. F. H. Oliver (head of the pharmacy department, Sunderland Technical College).

Conference Dinner

The social climax of the conference was a dinner on the Friday evening at which the chief guests were the mayor and mayoress; Mr. E. T. Kent (a member of the Society's Council) and Mrs. Kent; and Mr. G. H. M. Graham (a member of Executive, National Pharmaceutical Union). Mr. Fergusson, who proposed the toast to the county borough of Sunderland, said that he had learned that week that Sunderland was the largest shipbuilding town in the world. "I must admit," he said, "that until this week I had regarded Sunderland as a 'no man's land' created by the English to keep out the Scots! It has, however, come as a pleasant surprise to spend six days here. And the fact that we are here is entirely due to the borough, for which we are grateful." Mr. Fergusson thanked the mayor for the hospitable way he had received the delegates earlier that week. "For the arrangements and the accommodation we must thank Mr. Thompson and Mr. Hedley and the town's education department—their help has been most invaluable to us." Replying, THE MAYOR thanked the proposer of the toast "for the generous terms in which he has moved it." Alderman Allison went on to say that the governors of the technical college had, that evening, accepted a tender of nearly £750,000 for extensions to the college. "We not only welcome students, we also endeavour to cater for them, and the fact that in Sunderland we have students from all over the world bears that out." The alderman thanked the Association for their hospitality that evening and added that anything the borough had been able to do for the Association had been done with pleasure. He hoped that their deliberations would result in an improvement of the status of their profession and of mankind in general.

Proposing the toast to the Association, MR. KENT said that it added a lot to the profession in the way of prestige, and that the Pharmaceutical Society had recognised that work by donating £100 a year. As a practising pharmacist he was pleased to see that practical training in everyday work in the pharmacy was to be allowed for in the new course. "When I qualified, the newly qualified man spent some years as a qualified assistant gaining experience, but today you can become managers within a few days of qualifying. I think you will see how important this practical work is in the new course."

Mr. Kent went on to speak of the limitless opportunities for young pharmacists today in all spheres of the profession.

The conference chairman (MR. J. WYNNE ROBERTS) responded. He mentioned the conference was visiting Sunderland for the second time (the first was in 1953). The year had been a difficult one for the Association, owing to resignations, but routine business had been maintained, and the week's work had been concerned with putting the constitution in order. The need of the times was to broaden pharmaceutical education, and a four-year course would be one way of achieving that objective.

"The Sunderland School of Phar-

macy" was proposed by MISS ANNE SAVAGE (chairman for student exchange, International Pharmaceutical Students' Federation) who mentioned that the school, the largest of its kind in the country, was part of the Sunderland Technical College, which was celebrating its centenary during 1960. Its students came from all parts of the world.

The school's head (MR. F. H. OLIVER) acknowledging the toast, said that in twenty years of pharmacy teaching he had seen tremendous changes in pharmaceutical education: part-time had given place to full-time and one year to two and then three years at college—by some students extended to four or five.

Within ten years the number of students at the school had grown from fifty to 300, and the staff from three, plus three demonstrators, to about twenty-nine. Before the 1939-45 war there had been no grants. Now most students received some form of grant. Another advance was that nowadays research work was done at nearly all schools of pharmacy by post-graduates as well as by staff.

"The Guests" was proposed by MR. R. MILLS (a member of the B.P.S.A. executive) and responded to by MR. G. H. M. GRAHAM (a member of Executive, National Pharmaceutical Union).

SCOTTISH DEPARTMENT EXECUTIVE

Work, leisure and limitation of pharmacies

THE possible effect the limitation of pharmacies would have on the hours of work and leisure is to be the subject of a paper by Mr. W. C. D. Bain at the annual general meeting and branch representatives' meeting in Edinburgh on June 8. That was agreed at a meeting of the Executive of the Scottish Department of the Pharmaceutical Society on April 13.

MR. ANDREW OFFICER (chairman) reported that Sir Hugh Linstead had been promoted Commander of the Legion of Honour on the occasion of General de Gaulle's visit to London and in recognition of his chairmanship of the Franco-British Parliamentary Relations Committee.

"A Successful Function"

The RESIDENT SECRETARY reported that the Council of the Society had met in York Place, Edinburgh, April 5 and 6, and the dinner in the Adam Rooms had been a very successful function. The resident secretary was asked to record in the minutes the Executive's appreciation of Mr. Officer's conduct in the chair at the dinner and of the very successful arrangements which had been carried out by the resident secretary and his staff which had contributed so much to the smooth running of both the Council meetings and the dinner.

It was intimated that the following members were due to retire this year, but were eligible for re-election to the Executive:—J. D. C. Anderson, Aberdeen; W. C. Carmichael, Glasgow; S. G. Home, Edinburgh; J. D. Mair, Glasgow; W. A. Park, Aberdeen; and H. T. Thomas, Kelso. Arrangements had been made for the publication of short biographical notes on candidates for election to the Executive to appear in the pharmaceutical Press.

The meeting of scrutineers, it was agreed, would take place on June 7 at 7.30 p.m.

It was reported that the annual report of the Executive was in the printer's hands and that it would be issued to members in Scotland on April 26.

It was agreed that the chairman and resident secretary should represent the Executive at the annual general meeting in London on May 18 and the branch representatives' meeting on May 19.

The RESIDENT SECRETARY reported that it had been suggested to him that

certain members in Cupar, Fife, which at present was in the area covered by the Edinburgh and South-Eastern Scottish Branch, would be able to take a more active part in branch activities if Cupar were transferred to the Dundee and Eastern Scottish Branch. The seven pharmacists resident in Cupar had been written to asking whether they would prefer to be members of the Edinburgh Branch or the Dundee Branch. Six had replied in favour of joining the Dundee Branch and one wished to remain in the Edinburgh Branch. The Executive agreed that Cupar should be transferred from the Edinburgh Branch area to the Dundee Branch area and that the one pharmacist who wished to retain his connection with the Edinburgh Branch should be allowed that special privilege.

Reports on the Entrance, Intermediate and Pharmaceutical Chemist examinations held in December 1959/January 1960 and of the Entrance and Intermediate examinations held in March 1960 were received.

The Last Two-year Course

It was reported that all students in Scotland who had registered before March 1, 1958, and who had not yet started the Pharmaceutical Chemist course had been notified that the only college in Scotland offering a two-year final course commencing October 1960 would be the Heriot-Watt College and that that would likely be the last two-year course to be held in Scotland. The number of students to which that applied was ten.

The annual reports of the boards of examiners for England and Wales and for Scotland were received.

The RESIDENT SECRETARY reported that the new Scottish Certificate of Education and new regulations for the Attestation of Fitness of the Scottish Universities Entrance Board were coming into force in 1962, and he thought that the effect of those on the entrance regulations of the Society must be considered. It was agreed that a meeting of the Education Committee should be called at a convenient date to do that.

The RESIDENT SECRETARY reported on the Glasgow Careers exhibition. He said that it was difficult to assess its value, but he thought that there had been several serious inquiries every day and that it had served a pur-

pose as being good public relations for pharmacy to the general public. Both the chairman and Mr. Grosset confirmed that view and said that several pharmacists who had visited the exhibition had expressed satisfaction that the Society was represented.

Great appreciation of, and thanks were expressed to, the members of the Glasgow and West of Scotland Branch and members of staff of the Royal College of Science and Technology who had so willingly helped to man the Society's stand. The resident secretary was also thanked for the work he had done and was congratulated on the display.

It was reported that since last meeting four male "students" and two female "students" resident in Scotland had been registered, making the total for the year so far six.

It was agreed that the chairman would represent the Executive at the British Pharmaceutical Conference to be held in Newcastle-on-Tyne. The resident secretary would attend in an official capacity.

NARCOTIC DRUGS

1958 manufacture and 1959 requirements

AN addendum to the Report by the Permanent Central Opium Board to the Economic and Social Council on the work of the Board in 1959 has just been published (H.M. Stationery Office, price 5s.). It provides in tabular form "balance sheets" which tend to show for each country or territory whether the available supply of narcotics has been duly accounted for and whether the stocks at the end of the year tally with the balance calculated by the Board. The tables reveal that the following quantities (in kilos) were manufactured in the United Kingdom during 1958:—Morphine, 17,393; diacetylmorphine, 57; oxycodone, 12; hydrocodone, 67; thebaine, 9; thebaine, 344; codeine, 19,212; ethylmorphine, 834; pholcodine, 544; dihydrocodeine, 53; cocaine, 289; pethidine, 2,155; methadone, 67; dipipanone, 42; phenadoxone, 27; diethylthiambutene, 4.

The fourth supplement to the Estimated World Requirements of Narcotic Drugs in 1959 shows that the United Kingdom's estimate was amended. The new estimates are (previous estimates

in parentheses):—Morphine, 16,194 (15,750); diacetylmorphine, 64 (50); oxycodone, 2.5 (2); hydrocodone — (3); hydromorphone — (1); thebaine,

248 (177); codeine, 9,542 (9,800); ethylmorphine, 155 (160); pholcodine, 435 (400); dihydrocodeine, 118 (3); cocaine, 79 (130); pethidine, 1,314

(1,200); methadone, 100 (90); dipipanone, 65 (40); phenadoxone, 17 (25); dextromoramide, 5 (5); levorphanol, 6 (5); diethylthiambutene, 5 (5).

FIGURES IN THE PHARMACEUTICAL WORLD

UNDER such stalwarts as the late Mr. Herbert Skinner (its secretary for many years and a former president of the Pharmaceutical Society) and Mr. Joseph Hearle (a founder member of the National Pharmaceutical Union and until recently a member of the Association's Executive), the North London Pharmaceutical Association has made its own distinctive contribution to the welfare of the profession. Within two years from now the Association celebrates its Golden Jubilee, and pharmacists throughout the country will join in wishing it an equally influential future. For any such organisation the choice of secretary is of paramount importance and when, some months ago, Mr. A. E. Footitt resigned in order to take up a post in Western Australia, the Committee appointed in his place Mr. W. J. F. Laxton, B.Sc., F.P.S. Already it has become apparent that Mr. Laxton is a secretary in the best tradition of the Association. In quite recent weeks North London has been to the fore with a scheme for a Press campaign on behalf of proprietor pharmacists in the Metropolis. The proposal originated with the Association's chairman (Mr. J. F. Jack), who is also the secretary of the N.P.U. branch, and Mr. Laxton, as secretary of the Association, has had an active part to play in enlisting the support of the other London Associations. He is well placed to gain their goodwill because he himself directs a business comprising four pharmacies.

Mr. Laxton had a decidedly pharmaceutical upbringing, for both his father, the founder of the business and a former manager of the Vere Street, London, W.1, pharmacy of Allen & Hanburys, Ltd., and his mother, who until quite recently was active in the family business, are pharmacists. His own apprenticeship was served at the High Road, Tottenham, "head shop," and he qualified in 1943 from "The Square" (then at its war-time habitat of Cardiff). He did not rejoin the business of his parents until 1951, though more than war service had come between. At Cardiff he had, with a number of other students, been active in the Naval Division attached to the University of South Wales. With them he passed into the Royal Navy upon qualifying, and in January 1944 gained a Commission. From then until his demobilisation in 1944 he was engaged in bomb and mine disposal work on the Continent of Europe, and he left the Navy in 1946. Armed then with an educational grant, he elected to use it for further studies in chemistry, with the general intention, at that time, of going on to a post in pharmaceutical manufacture. From Regent Street Polytechnic, accordingly, he took B.Sc. and B.Sc. special degrees in chemistry. In the meantime, however, he had married and started a family, and a return to the retail via the family business appeared a more immediately rewarding and sensible course. Since returning to the busi-



MR. W. J. F. LAXTON

ness he has done a lot, by changes in internal layout, to make the pharmacies more productive, and he has also, of course, come into pharmaceutical public life. His appointment to the Association secretaryship was the penalty, he would say, of asking too searching questions upon one of the Association's annual reports, but probably he has as little regret as have the members in general that he took office. His secretarial duties appear to sit lightly upon him, considering that they are in addition to his principal responsibility of running the business, in which his father, now seventy-four, is understandably less active than formerly. He is

also a member of the Middlesex Pharmaceutical Committee and of the management committee of the Tottenham Hospital. Another claim on his time is that he has four children, and at weekends there is also the counter-attraction of sailing at the Essex coast. The children, at least, are a guarantee that he will put forth his best efforts to maintain and improve the economic rewards from the practice of retail pharmacy. It is most essential, he believes, that pharmacists should take action, both individually and collectively, to make themselves fully competitive with other traders, especially areas of trade once the accepted province of the chemist.

THE DRUG AND THE ROUTE

A review of methods of drug administration

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III. The Sublingual Route

IN the previous article in this series (C. & D., February 13, p. 179), attention was paid to preparations used locally in the mouth. The sublingual and buccal mucosa may also be used as sites from which to obtain systemic absorption of drugs. This article is devoted to the sublingual route which, whilst having a limited use, forms a convenient method of administering special types of drugs.

The possibility of absorption from the mucosa of the mouth has been recognised for many years, and frequent attempts have been made to put it to practical use in the administration of drugs that might be considered, for one reason or another, to be unsuitable for ingestion. The earliest references to the sublingual administration of glyceryl trinitrate date back to the end of the nineteenth century (1). Other substances that have been reported to be effective by the sublingual route include deoxycortone acetate (2), atropine methonitrate, pentaerythritol tetranitrate, isoprenaline sulphate, the steroid sex hormones, and some enzymes. A large number of other substances, including morphine (3), insulin (4) and heparin (5) have produced inconclusive or negative reports.

The objects of sublingual administration may be enumerated as follows:—

- (a) To avoid inactivation of the drug by the secretions of the stomach and intestines;
- (b) to obtain absorption of a drug that is only slowly or incompletely absorbed from the lower parts of the alimentary tract;
- (c) to avoid inactivation of the drug in the liver.

It is possible that the sublingual route produces a speedy onset of action, since the drug is brought into immediate contact with the absorbing mucosal surface. Sublingual administration, therefore, has an established value in the use of glyceryl trinitrate for the relief of angina, where a speedy response is essential and where it is necessary to avoid inactivation of the drug in the stomach. The method may also be of value for isoprenaline sulphate and for ergotamine tartrate, both of which are sometimes required to act quickly.

It has been claimed that sublingual administration avoids the degradation which some hormones suffer during passage through the liver. The blood supply from the tongue passes into the jugular vein and thence to the vena cava. A drug absorbed by that route, therefore, by-passes the portal circulation and avoids passage through the liver. Hormones, however, generally exert their effects by circulating continuously around the body, and it seems unlikely that sublingual administration completely avoids inactivation of those substances in the liver.

Assessment of Sublingual Absorption

Although some drugs are at present widely accepted as being more effective sublingually than when swallowed, the evidence on which that acceptance is based seems, in some cases, to be of doubtful validity. Most of the evidence is based solely on an assessment of clinical factors, and there appear to have been few thoroughly controlled trials. Objective experimental evidence in animals is not easy to obtain because of the difficulties of ensuring sublingual administration to animals.

There are numerous reports of clinical evidence for the effective absorption of drugs from the mouth, but many of them provide no direct comparison with the results of administering the same drug by other routes. Where such comparison has been made, the evidence of various workers is often contradictory. For example, it has been reported that deoxycortone acetate may be given sublingually for the maintenance treatment of Addison's disease in a dosage quantitatively equivalent to that necessary by intramuscular or subcutaneous injection (2). Other reports indicate, however, that from three to five times the intramuscular dose is required when deoxycortone acetate is given sublingually (6).

One possible reason for the variability of the results of work carried out on human subjects is the difficulty of controlling the quantity of the drug that is swallowed with the saliva. That has been overcome in animal experiments by the administration of the drug to an anaesthetised animal whose oesophagus has been ligated and trachea cannulated so that there is no possibility of accidental ingestion (7). Such methods, however, have been applied only to the assessment of different pharmaceutical formulations and have not been used to compare the sublingual with other routes of administration.

Factors Influencing Sublingual Absorption

It has been suggested that the penetration of an organic compound into living cells is determined by its ability to dissolve in tissue lipids (8). It follows that the sublingual absorption of a drug will depend upon its distribution coefficient between fatty and aqueous media (9). However, the existence of lipid insoluble but readily penetrating organic substances has necessitated modification of Overton's original lipid theory, and it is now thought that non-lipid pores in the cell membrane permit the passage of such substances (10). The penetration of lipid-insoluble drugs would depend, therefore, on their ability to pass through the pores in the cell membrane. Substances with low molecular volume will penetrate most readily by that route.

In general, it seems probable that a drug will be most readily absorbed if it combines solubility in fats with a reasonable degree of solubility in water, enabling it to be released from the lipid layer into the tissue fluids. A water-soluble drug may be absorbed if it has a low molecular volume.

Certain enzymes have shown an ability to penetrate connective tissue by their proteolytic effect on the matrix, and that has led to the suggestion that they might be able to penetrate the buccal mucosa. Clinical evidence has confirmed that theory (11) although there have also been some negative results (12). Buccal tablets of streptokinase/streptodornase and of trypsin are now available commercially.

Formulation of Sublingual Preparations

In experiments on anaesthetised animals it has been shown that sublingual absorption is influenced (a) by the form of the drug (i.e., whether a base or a salt) and (b) by the solvent in which it is dissolved. Unfortunately there does not appear to be any general rule, and those factors need to be determined experimentally for each individual drug. The

solvent most commonly used is alcohol, and an alcoholic solution of atropine methonitrate is included in the British National Formulary for sublingual administration to infants. That preparation must be dispensed in tightly closed containers, since there is a serious danger of concentration by evaporation. Gelatin lamellæ have also been utilised for giving atropine methonitrate by the sublingual route. Deoxycortone acetate has been administered as a solution in propylene glycol and in mixtures of propylene glycol and alcohol.

Tablets are now more commonly used for sublingual administration than liquid preparations. For that purpose, tablets need to be hard and to dissolve slowly in the mouth (13) so that there is a gradual release of the drug which is absorbed immediately from the sublingual or buccal mucosa. If the drug is released too rapidly, much of it will be swallowed with the saliva and the objects of sublingual administration will be lost. For a similar reason, acidic substances and anything that might cause excessive salivation should be avoided in the formulation of the tablet.

Bases which have been used for making sublingual tablets include lactose, gelatin, sucrose, glycine and water-soluble waxes such as the macrogols. In an attempt to determine the influence of excipients and diluents on the amount absorbed, radioactive substances were incorporated into various tablet bases, but no correlation was obtainable from the results (14). Glyceryl trinitrate tablets, B.P., are now prepared in a mannitol basis which has been shown to produce a more stable preparation than the chocolate-flavoured basis formerly used (15). Since they are intended to dissolve slowly in the mouth, no disintegration test is applied to glyceryl trinitrate tablets. For methyltestosterone and

ethisterone a disintegration time of one hour is allowed, against the usual fifteen minutes for tablets intended to be swallowed. Those hormones are sometimes given sublingually, though the B.P. does not specify that route.

A tablet placed in the sublabial position, i.e., between the upper lip and the gum, may be more effective than one in the sublingual position (17) as the latter is more likely to cause an excess of salivation and to be more disturbed by slight continuous movements of the tongue, resulting in more of the drug being ingested.

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Onward from Galen

A CURRENT CAUSERIE

A SUCCESSFUL apothecary of the nineteenth century was asked to invest in a new glass-making business. He was William Pilkington, of St. Helens, Lancs, who had already transformed a sideline into a flourishing wine and spirits business when he was requested to become a sleeping partner in manufacturing the commodity used as containers for the goods he sold. But Pilkington was badly cast as a "sleeper." His active brain had taken the business of his father and brothers several steps forward and, when difficulties threatened the new glass company, it soon had at the head a new, driving genius. Three generations later the Pilkington organisation, while remaining a family-owned business, makes all the flat glass produced in Britain. The story of the family and its enterprise has been told by T. C. Barker (lecturer in economic history, London School of Economics and Political Science) in "Pilkington Brothers and the Glass Industry" (Allen & Unwin, price 40s.). Four generations of the family have shared major changes in English life, and the company also proved to Ford of America that it had a contribution to make there, too. Latest figures show that 10 million ft. of glass came from the Pilkington works in 1959, going to manufacturers of lenses, measures, flasks and for innumerable other purposes. Every car made in Britain had in it some of the firm's flat glass. In the inescapable television set Pilkington glass again featured. It may be claimed that the £6,000,000 corporation began as a mere sideline from the apothecary interests of the original Pilkingtons. In the spring of 1790, at a period when the textile trade required bleaching agents, Richard Pilkington recorded "We began to make Chemical Licquor." His bleaching business would profit by that venture, he believed. It did, but the proceeds went towards rescuing his son James from the bankruptcy of his fustian business. Land in Liverpool, furniture, horses and his house were sold to meet debts. A younger son, William, was apprenticed to Dr. William Filde, St. Helens, and Barker comments: "Medicine at that time was a rather crude, cruel and casual profession. Doctors still relied on trial and

error, and patients suffered from their varying aptitudes for cutting, sawing and bleeding . . . they were usually described as surgeons and apothecaries, the latter title covering the sale of herbs, pills, drugs and medicines. Port and other wines were also regularly prescribed to patients. . . ." Sales of wines and spirits were "an essential sideline. One Lancashire doctor ordered as much as 35 gall. of port at a time, even though his practice was a small one. . . . The ordinary surgeon could not make a living . . . he was compelled to treat internal diseases, keep a shop, and sell drugs. . . ." William's apprenticeship began in 1779, at the age of fourteen. In 1785 he attended St. George's Hospital, London, for six months and became a doctor. But business underwent a decline. The second son, his namesake, grew up to revitalise the druggist business, extend the wine department and establish a distilling laboratory. Invited to spare a little profit but no time on the glass business, he obligingly put forward the money, later coming to its rescue and taking over control. Today's chairman of the company, Sir Harry Pilkington, lives at the address in St. Helens which has been occupied continuously by the family since 1820.



SOLD only in drug stores, a "protective milk" intended to relieve the pain of rheumatoid arthritis is being marketed in twenty Iowa cities, reports the *American Druggist*, April 4. The milk retails at \$1.10 per quart and is sold only on prescription. The ability of the milk to combat the pain of rheumatoid arthritis is said to be the result of an injection of a preparation of the "disease organisms" directly into the udder of the cow giving the milk. During August the company intends to issue a milk that will ease hay fever conditions. Total sales are now running about 1,500 quarts a week. No doubt those at the British Ministry of Health are beginning to draft statutory instruments under the Therapeutic Substances Act but what we wonder is whether, if the product is issued in Britain, will the farmers be subsidised by Parliament or, as a section of the pharmaceutical industry, under the criticism normal to that.



A view of the beautiful citronella plant grown by settlers in El Soberbio (Misiones, Argentina. Right: Bois de rose logs being reduced to smaller size before putting into a machine which cuts them into chips ready for distillation.

SURVEY OF ESSENTIAL OIL PRODUCTION

London lectures by Dr. Ernest Guenther

AT the invitation of the British Aromatic Compound Manufacturers' Association Dr. Ernest Guenther, the world authority on essential oils, paid a return visit to London to deliver two lectures on May 4. The first, entitled "Essential Oil Production in Various Parts of the World," was illustrated with colour slides. The second dealt with a trip he made to investigate the oil production facilities in South America during 1959 and this was followed by a 45-minute colour film taken by him on the tour. A sound track had been subsequently added.

Dr. Guenther began his first lecture with a survey of citrus oils beginning with their production in Sicily. It was difficult to get exact annual production figures, the following were the nearest he could supply: Sweet orange, 50-60,000 kilos, which figure was increasing rapidly because of the growing demand for beverages; bitter orange, 5-10,000 kilos; bergamot, 160-190,000 kilos; lemon, 200-300,000 kilos; mandarin, 30-40,000 kilos; hand-pressed lemon oil was rapidly going out, he believed only about 2 per cent. of production was obtained by that method now. On an average one lemon yielded about 0.5 gm. oil when hand pressed but distillation gave twice that amount, while the hand pressed proved expensive it was a much better product since it contained no extraneous liquid. The soil of Sicily consisted mainly of decomposed lava which was rich in the essential elements for the growth of citrus plants.

Moving 5,000 miles westwards to Florida there was plenty of land and water and temperatures were favourable for citrus growing. The only snag was occasional heavy frosts that wiped out the crop, but the United States department of agriculture had found out that certain trace elements introduced into the soil could make the plants more frost resistant. Production of orange oil was in the region of 3.5 million lb. and lemon oil up to 50,000

lb. Further westwards to California there were 10,500 growers of citrus fruits cultivating a total area of 250,000 acres. The freight on the products of the industry alone amounted to \$40 millions a year and the retail value of the products was estimated at \$500 millions. The essential oils were, of course, a by-product (one of many) of the industry. Production of lemon oil in California amounted to 1½ million lb. and that of orange oil to 500,000 lb.

Decline in Lemon Prices

Dr. Guenther gave three reasons for the fall in price of lemon oil which took place recently and which had surprised the trade:—(1) An abundance of citrus plants in Arizona and California and thus abundant fruit supplies; (2) new extraction methods gave greater yields; (3) a political move to cut out suppliers of adulterated oil which had been flooding the market at low prices. He could not however see the present price of \$1.50 per lb. for genuine oil remaining for ever. He expected it to rise to \$5 in the near future.

The high cost of labour in the United States forced the producers to mechanise wherever possible. The citrus fruits after being picked in the orchards were never handled again. New machinery was all the time being evolved yet for some essential oils, for example, wintergreen and sweet birch, primitive methods were still employed. Dr. Guenther also talked on the peppermint and spearmint productions; in the case of *M. piperata* the production, he said, was around 240,000 lb. in the U.S. but the plant was extremely prevalent to a fungus disease which caused the yield of oil to fall from 60 lb. per acre to as low as 23 lb. per acre. In the case of spearmint, production was around 700,000 lb. a year.

Travelling south next to Guatemala, he said that the oil industry there was well organised and controlled by an association. The average production over the past ten years of citronella oil

was 750,000 lb. and of lemongrass, 500,000 lb. In recent years however those figures had fallen substantially because of lower world prices. Reunion geranium oil was derived from a plant grown originally in the Cape Province; from there the plant was brought to Kew Gardens and propagated, a few plants later being sent to Grasse in France from where it was shipped to French Reunion.

Introducing the South American film Dr. Guenther gave a brief review of the economic difficulties facing the countries on the sub-continent where two-thirds of the vegetation was tropical and only 4 per cent. of the soil was under cultivation (against 12 per cent. in Canada and the U.S.). There were poor roads, not many railways and 50 per cent. of the adult population were illiterate. Agriculture upon which the countries had previously depended for their livelihood was not enough for the population which was increasing explosively. Some of the countries were rich in minerals, forestry, etc.; resources hitherto untapped. At present inflation was rampant keeping the people poor but the whole area was "a sleeping giant whose awakening could astonish the world."

Peppermint (*piperata*) produced in Argentina was of good quality amounting to 90,000 lb. a year. *M. arvensis* amounted to 80,000 lb. and was mostly used for the manufacture of menthol or purchased locally as an investment. Some citrus oils were also produced.

Paraguay was of course known for its petitgrain. In Brazil sassafras production was started in 1932 now there were 150 stills in use, the production was around 17,000 kilos a year. Production of *M. arvensis* was also growing rapidly because Japanese production had fallen recently through that Government's edict that more sugar beet must be grown. There were some fifty distillers producing bois de rose oil in Brazil and Peru also produced some of the oil.

TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, MAY 11: Trading in all sections of the market was again quiet with prices steady at previous levels for most commodities.

Australian HONEY was slightly dearer on the spot. Shipment rates for AGAR were threepence per lb. lower and for TURMERIC 7s. 6d. per cwt. dearer. White Sarawak PEPPER continued to fall, quotations being threepence per lb. down on the previous week. PAPAIN also continued to ease there being considerable variation between quotations according to quality; the value of grade one Tanganyikan was 15s. per lb.

New-crop LEMONGRASS OIL for May-June shipment was three-halfpence per lb. dearer and SANDALWOOD, both Mysore and East Indian, ranged from 115s. to 120s. per lb. against 107s. 6d. to 110s. Home produced CASTOR OIL was dearer following the recent rising market in India.

One manufacturer has notified further reductions in the price of HYDROGEN PEROXIDE the 27.5 per cent. by weight of available oxygen being reduced £5 and the 35 per cent. by £12 per ton. ISOPHORONE was reduced £10 to £14 dependent on quantity, one-ton lots in drum being now £225 (against £237).

Pharmaceutical Chemicals

ACETIC ACID.—B.P. glacial, 10-ton lots, £112 per ton naked; technical (80 per cent.) £97. Carboys are £8 and demijohns, £10 per ton extra. Single carboy lots 1s. 8d. per lb. (3s. 8d. per kilo).

ADRENALINE.—(Per gm.). Synthetic B.P. 1-kilo lots, 11d.; 500 gm., 1s. 1d. ACID TARTRATE, B.P., 1 kilo, 7½d.; 500 gm., 9d.

ALON.—Micro-crystalline, 14-lb. lots, 3s. 6d. per lb.

ANTIMONY SALTS.—CHLORIDE Sol., B.P.C. 1934, carboys, 2s. 6½d. lb.; OXIDE, B.P.C., 3s. lb. One-cwt. lots. POTASSIUM TARTRATE, 7s. 6d. per lb.; SODIUM TARTRATE, 12s. 6d.

ASPIRIN.—5-cwt. lots (in kegs), 4s. 9d. per lb.; 1-cwt., 4s. 11d. CALCIUM SALT, 12s. 6d. per lb.

ATROPINE.—Rates for 16-oz. (500 gm.):

	per oz.	per kilo.
	s. d.	s. d.
ALKALOID	39 0	1375 0
METHONITRATE ..	39 0	1375 0
METHYLBROMIDE ..	38 6	1357 0
SULPHATE	34 0	1198 6

BARIUM SULPHATE.—B.P., 250-kilo lots, 3s. 3½d. per kilo.

BENTONITE.—B.P. about £70 per ton.

BENZOIC ACID.—One cwt., 2s. 11½d. per lb.; and SODIUM SALT, 2s. 9½d. per lb.

BISMUTH SALTS.—Prices (per lb.) in packages over 2-lb.:—

	28 lb. to 1 cwt.	1 cwt.	5 cwt.
	s. d.	s. d.	s. d.
CARBONATE	20 6	20 0	19 6
SALICYLATE	20 3	19 9	19 3
SUBGALLATE	19 9	19 3	18 9
SUBNITRATE	18 6	18 0	17 6

BROMIDES.—Crystals (per lb.):—

	1 cwt.	5 cwt.
	s. d.	s. d.
POTASSIUM	2 6	2 5
SODIUM	2 6	2 5
AMMONIUM	2 10	2 8½

Powder is three-halfpence per lb. more, packages free, carriage paid terms.

BRUCINE.—ALKALOID and SULPHATE 100-oz. lots, 10s. 6d. per oz.

CAFFEINE.—ANHYDROUS, less than 50-kilo lots, 35s. per kilo; MONOHYDRATE, B.P., 34s.; CITRATE, 26s. kilo.

CHLOROFORM.—1-cwt. lots in winchesters, 3s. 4½d. per lb.; 56-lb., 3s. 6d. In drums, 3s. 2d. and 3s. 2½d. per lb. respectively.

CINCHOPHEN.—One-cwt. lots, 21s. per lb.

CITRIC ACID.—Domestic material (in kegs) per cwt. 1-4-cwt. lots, 220s. per cwt. 5-cwt., 216s. In paper bags, 5-cwt. lots are 208s.

CREAM OF TARTAR.—Home trade:—1-ton lots, 241s. per cwt.; 10-cwt., 242s.; 5-9-cwt., 243s.; 2-4-cwt., 244s.; 1-cwt., 245s. (If supplied in bags deduct 5s.)

CREOSOTE.—B.P. quality, ex beechwood, from 6s. 9d. to 7s. 6d. per lb.

DIPHENAN.—(Per lb.). 55s. 3d. (56-lb.) to 63s. (1-lb.).

EPHEDRINE.—ALKALOID nominally 6s. 6d. per oz., SULPHATE, 4s. and HYDROCHLORIDE, 3s. 3d. per oz.

FORMALDEHYDE.—B.P. solution, 5 drum lots, 60s. per cwt.

GALLIC ACID.—B.P., 10s. 7d. per lb. for 1-cwt. lots. Technical grade, 9s. 9d.

HYDROGEN PEROXIDE.—27.5 per cent. (by weight), £115 per ton; 35 per cent. £138 in returnable carboys.

HYDROQUINONE.—One-cwt. lots, 11s.; 1-ton, 9s. per lb.

IODINE.—Resublimed in 50-kilo lots or over, 23s. 1d. per kilo. Minimum delivered rate for CRUDE is 15s. per kilo.

IODOFORM.—Powder, 22s. 4d. per lb. in 28-lb. lots; 21s. 8d. in 1-cwt. and 21s. 1d. in 5-cwt. lots. Crystals are 3s. per lb. more than the powder.

KAOLIN.—LIGHT, 60s. per cwt.; 1-ton 57s. per cwt.

METHOIN.—B.P., 120s. per lb.

OLEIC ACID.—B.P. grade, £170 10s. per ton (£174 10s. single drum lots); 1 gall. tins 21s. per gall.

OXALIC ACID.—Manufacturer's rates for 1-ton lots, £128 10s. per ton, delivered in free kegs.

PARACETAMOL.—Minimum 1-ton, 10s., per lb.; 1-cwt., 10s. 3d.

PARALDEHYDE.—B.P. in 12-winchester lots, 2s. 10d. per lb. (6s. 3d. kilo); 10-gall. carboys, 2s. 4d.

PHENACETIN.—Ice crystals in drums is 1s. 4½d. per lb. (under 1-ton lots, 1s. 7½d.). Detached crystals, 2d. per lb. above and LIQUID, B.P., ¾d. per lb. below the foregoing prices.

PIPERAZINE.—(50-kilo lots), ADIPATE, 31s. per kilo, CITRATE, 30s.; HEXAHYDRATE, 19s. and PHOSPHATE, 35s.

PYRIDOXINE.—One-kilo, £52 10s. per kilo; 10 kilos, £50 15s.

QUINIDINE.—Per oz.:—

	Home Trade	500 oz.	100-400 oz.
	s. d.	s. d.	s. d.
QUINIDINE	7 11½	8 1½	8 1½
ALKALOID	9 4½	9 6½	9 6½
GLUCONATE	6 7	6 9	6 9
HYDROBROMIDE ..	6 9	6 11	6 11
HYDROCHLORIDE ..	6 0	6 2	6 2
SULPHATE	11 2	11 4	11 4
HYDROQUINIDINE ..	8 6½	8 8½	8 8½
GLUCONATE			

For export quinidine alkaloid ranges from £12 12s. 3d. to £12 17s. 4d. per kilo and sulphate from £9 10s. 5d. to £9 15s. 6d.

QUININE.—1,000-oz. lots:—ALKALOID, 3s. per oz.; SULPHATE, B.P., 1932, 1s. 11½d.; SULPHATE, B.P., 1958, 2s. 2½d.; BISULPHATE, 2s.; DIHYDROCHLORIDE, 2s. 9d.; HYDROCHLORIDE, 2s. 6½d.; ETHYL CARBONATE, 4s. 3d.; HYDROBROMIDE, 2s. 5d. Quantities under 1,000 oz. plus one penny per oz., under 100 oz. plus threepence.

ROCHELLE SALT.—Powder or granulated, 5-cwt. lots or over in kegs, 220s. per cwt.; 1-cwt. 222s. 6d. (bags less 5s.).

SALICIN.—Quoted at 17s. 6d. per oz.

SALICYLIC ACID.—One-cwt., 3s. 2½d. per lb.; 5-cwt., 3s. 0½d. per lb.

SANTONIN.—5-kilo lots, 400s. per kilo (11s. 4d. per oz.).

SEMICARBAZIDE HYDROCHLORIDE.—Technical grade, 15s. 8d. per lb. for 1-cwt. lots.

THEOBROMINE.—ALKALOID in 50-kilos, 82s. 9d. per kilo.

UREA.—Pharmaceutical grade, £60 10s. per ton in 1-cwt. bags non-returnable; technical quality, £42 per ton (4-ton lots).

Alcohol

BRITISH SPIRIT per proof gall.:—

Ethyl Alcohol: (95 per cent. Gay Lussac, 66 o.p.); where the number of proof gall. taken over any one year ended March 31 is 300,000 or over 3s. 10½d.; 200,000 to 300,000, 3s. 10½d.; 100,000 and less than 200,000, 3s. 11½d.; 50,000 and less than 100,000, 3s. 11½d.; 10,000 and less than 50,000, 4s. 0½d.; 2,500 and less than 10,000, 4s. 0½d. Prices are exclusive of duty and are for tank wagon lots. In 40-gall. drums there is a surcharge of two-pence per proof gall.

Absolute Alcohol, 95.5 per cent., 74.5 o.p., from 4s. 2½d. to 4s. 4½d. for same quantities; the special high strength (99.9 per cent., 75.2 o.p.) from 4s. 4½d. to 4s. 6½d. Doubly Rectified Alcohol (S.V.R.) 95.8 per cent., 68 o.p., from 4s. 0½d. to 4s. 2½d.; and P.I. Rectified Alcohol, 96.1 per cent., 68.5 o.p., 4s. 1½d. to 4s. 3½d. R. R. Absolute Alcohol (re-rectified), 99.7 per cent., 75 o.p., 14s. 6d. per bulk gall. net.

Duty is £10 12s. 4d. per proof gall.

Methylated Spirit

METHYLATORS' rates per bulk gall. in Great Britain are as follows:

Industrial Methylated spirit: Strength 61 o.p., 500 gall. and over, 5s. 8½d.; 100 gall. and under 500 gall., 5s. 1½d.; 40 gall. and under 100 gall., 6s. 3d.; 10 gall. and under 40 gall., 6s. 8½d.; 5 gall. and under 10 gall., 7s. 2d. Strength 64 o.p., ½d. per gall.; 66 o.p. (B.P.), 1d.; 68 o.p., 3½d. more than the above rates with 74 o.p. at 6s. 6d.; 6s. 9d.; 7s. 0½d.; 7s. 6d. and 7s. 11½d. for similar quantities. Tank wagon delivery is 2d. per gall. off list price—minimum, 500 gall. For industrial methylated spirit of standard toilet quality prices are from 7s. 0d. (tank wagon) for 500 gall. to 8s. 7½d. for 5-10 gall. (in drums) for 64 o.p.

Pyridinised industrial methylated spirit: Strength 66 o.p., 500 gall. and over, tank wagon delivery, 5s. 11d.; 100 gall. and under 500 gall. (in drums), 6s. 4d.; 40 gall. and under 100 gall., 6s. 7½d.; 10 gall. and under 40 gall., 7s. 1d.; 5 gall. and under 10 gall., 7s. 6½d.

Mineralised methylated spirit: Strength 64 o.p. in one delivery, 100 gall. and under 500 gall., 6s. 4d.; 40 gall. and under 100 gall., 6s. 7½d.; 10 gall. and under 40 gall., 7s. 1d.; 5 gall. and under 10 gall., 7s. 6½d.

Terms:—Deliveries free and carriage paid on returned empties; net cash.

Crude Drugs

ACONITE.—Spot: Spanish *napellus*, 2s. 6d. per lb.

AGAR.—Kobe No. 1, 13s. 9d. per lb., in bond; shipment, 13s. 3d., c.i.f.

ALOES.—Cape primes, spot, 200s. per cwt. quoted; shipment, 192s. 6d., c.i.f. Curaçao, 500s., spot.

BALSAMS.—Per lb.:—CANADA: Spot, 22s. for paper-filtered. COPAIBA: Para scarce on the spot, small lots at 7s. 9d., duty paid. PERU: Spot, 9s. 6d. in bond. TOLU (genuine as imported): spot cleared, shipment not offering. Small parcel afloat quoted 24s., landed; B.P., 14s. 3d.

BENZOIN.—Sumatra block, spot £22 to £30 as to quality.

BUCHU.—Spot rounds, 3s. 6d. per lb., shipment, 3s. 1d., c.i.f.

CALAMUS.—Root, 1s. 2d. per lb., c.i.f.

CALUMBA.—Root, 100s. per cwt., spot; 87s. 6d., c.i.f.

CAMPHOR.—B.P. powder, 3s. 7½d. per lb. in bond.

CARDAMOMS.—Aleppy greens, spot, 15s. 3d. per lb.; prompt shipment, 14s. 6d., c.i.f. Seeds, shipment, 21s. 6d., c.i.f.

CASSIA.—*Fistula*, 115s. per cwt., spot; *lignea*, 400s., duty paid.

CINNAMON QUILLS.—Shipment (c.i.f., per lb.) 4 O's, 5s. 10d.; 3 O's, 5s. 8½d.; O, 5s. 4½d.; quillings, 3s. 3½d.; featherings, 1s. 8½d.

COCHINEAL.—Black-brilliant, 12s. 9d., per lb., spot; Peruvian silver-grey, 4s. 6d.

COCILLANA.—Bark, 2s. per lb., spot.

COLOCYNTH PULP.—Spot, 2s. 6d. per lb.

DIGITALIS.—*Purpurea* for shipment, 1s. 2½d. to 2s. 6d. per lb., c.i.f., as to test.

ELEMI.—Spot from 1s. 10½d. per lb., shipment, 1s. 7d., c.i.f.

ERGOT.—Portuguese, 5s. per lb., c.i.f.; spot, 5s. 6d. East European not offering.

FRANGULA.—Spot, 105s. per cwt.

GENTIAN.—Spot: French, 155s. per cwt.

GINGER.—African, shipment, 170s., c.i.f. Jamaican No. 3, spot, 210s., shipment, 190s., c.i.f. Cochín, shipment, new crop, 177s. 6d., c.i.f.

GUM ACACIA.—Kordofan cleaned sorts, 172s. 6d. per cwt., spot; May-June shipment, 164s., c.i.f.

HENNA.—Indian, spot, 90s. per cwt.

HONEY.—Australian light amber, 92s. 6d. to 97s. 6d. and medium amber, 87s. 6d. to 92s. 6d. Argentine, 102s. 6d. to 105s.; Jamaican, 115s. to 120s.; Canadian clover, 145s. to 150s., all per cwt. on the spot ex warehouse.

IPECACUANHA.—Steady. Matto Grosso, 53s. to 55s. 6d. per lb., c.i.f., as to position; Colombian, 52s. 6d., c.i.f. Spot Colombian, 55s.

JUNIPER BERRIES.—Italian 90s. per cwt., spot.

KARAYA.—No. 1 gum, spot 265s. to 285s. per cwt., No. 2, 225s.

LANOLIN.—ANHYDROUS, B.P. is from 170s. to 175s. per cwt. in 1-ton lots and HYDROUS, B.P., 150s., free drums, delivered.

LEMON PEEL.—Spot, 2s. 6d. per lb.; shipment 230s., c.i.f.

LIQUORICE.—Natural root: Persian on the spot, 46s. 6d. per cwt. Block juice: Anatolian from 190s. per cwt.; Italian stick from 310s. to 470s. per cwt.

LOBELIA HERB.—American, 4s. 9d. per lb., spot.

MACE.—Whole pale blade, 23s. 6d. per lb., spot.

MENTHOL.—Chinese, 67s. 6d. per lb., duty paid as to seller; shipment not offering. Brazilian, 54s. 6d., in bond; 54s. 6d., c.i.f.

NUTMEGS.—West Indian 80's 12s. per lb., spot; sound unassorted, 9s. 6d.; defectives, 7s. 8d.

NUX VOMICA.—Spot, 125s., cwt.; shipment, 105s., c.i.f.

ORANGE PEEL.—Spot: Sweet ribbon, 2s. per lb.; bitter quarters: West Indian, 1s.; Spanish, 1s. 9d.; bitter ribbon, 1s. 6d.

ORRIS ROOT.—Florentine, 350s. per cwt.

PAPAIN.—Tanganyikan, 14s. per lb., c.i.f., for grade one, spot, 15s. Ceylon, No. 1 white, 13s. 6d., c.i.f.; brown, 10s., c.i.f.

PEPPER.—White Sarawak spot 5s. 4½d. per lb.; shipment, 5s. 2d., c.i.f. Black Sarawak, 4s. 1d. spot and 3s. 11½d., c.i.f. Black Malabar, 500s. per cwt. spot; 530s., c.i.f.

PEPPERMINT LEAVES.—Dutch whole, 1s. 11d. to 2s. 7d. per lb., c.i.f.

PIMENTO.—Spot, 590s. cwt.; shipment, 540s., f.o.b.

PYRETHRUM.—Extract, minimum, 25 per cent. w/w pyrethrins, 75s. per lb. for small lots.

QUASSIA.—Spot, 55s. per cwt., ex wharf.

QUILLARIA.—Spot whole bark, 110s. per cwt.; crushed, 145s. Whole for shipment, 97s. 6d., c.i.f.

SAFFRON.—Mancha selecta, 147s. 6d. per lb.

SARSAPARILLA.—Jamaican native red on spot, 2s. 6d. per lb.; shipment, 2s., c.i.f.

SEEDS.—(Per cwt.) ANISE.—Bulgarian, 125s.; Spanish, 165s., duty paid. CARAWAY.—Dutch 155s., duty paid. CELERY.—Indian, 140s., spot sellers; shipment, 120s., c.i.f., quoted. CORIANDER.—Moroccan, 45s., duty paid sellers; shipment, 41s. 6d., c.i.f., sellers. CUMIN.—Indian, 235s., spot; Iranian, 250s., duty paid; Ceylon, 200s., c.i.f. DILL.—Indian, short at 100s., nominal; shipment, 82s. 6d., c.i.f. FENNEL.—Chinese quoted at 107s. 6d., spot; Indian, 125s. FENUGREEK.—Moroccan, 55s., duty paid. MUSTARD.—English, 87s. 6d. to 97s. 6d., according to quality.

SENEGA.—Spot, 18s. 9d. per lb.

SENNA.—*Tinnevely* LEAVES, prime No. 1, 1s. 5d. per lb., f.a.q.; No. 3, 9d. PODS: manufacturing (f.a.q.), 10d. and hand-picked, 1s. 6d. to 1s. 10d. *Alexandria* pods: Manufacturing, 1s. 6d.; new crop hand-picked, 5s. to 6s.

SHELLAC.—F.O.T.N., 200s. per cwt.; No. 1, 225s. 6d.; F.O., 232s. 6d. to 282s. 6d., spot.

SQUILL.—White 85s. per cwt., spot.

STRAMONIUM.—Indian LEAVES 60s. per cwt., spot. Dutch 0·5 per cent. alkaloid 93s., c.i.f.

STYRAX.—Spot, 33s. per lb., shipment, 32s., c.i.f.

TONQUIN BEANS.—Para spot, 7s. 9d. per lb. Shipment about 7s. c.i.f. Angostura 11s.

TRAGACANTH.—No. 1 ribbon, £135 to £140 per cwt. No. 2, £125 to £130.

TURMERIC.—Madras finger on spot is 100s. per cwt.; new crop, prompt shipment, dearer at 92s. 6d., c.i.f.

VALERIAN ROOT.—Spot: Indian (with rootlets), 130s. and Belgian, 175s. per cwt. Dutch whole (max. 2½ per cent. sand) for prompt shipment, 173s., c.i.f.

VANILLIN.—Rates (per lb.) are now:—5-cwt. lots, 23s. 3d.; 1-cwt., 23s. 6d.; 56-lb., 23s. 9d.; smaller quantities, 24s.

WAXES.—(Per cwt.) BEES'—Dar-es-Salaam, spot, 485s.; shipment, 480s., c.i.f. Abyssinian, spot 410s. in bond; shipment, 405s., c.i.f. Benguela, shipment, 380s., c.i.f. Sudanese, spot, 450s.; shipment, 380s., c.i.f. CANDELLILA, spot, 475s. CARNAUBA, fatty grey, spot, 595s.; shipment, 585s., c.i.f.; prime yellow, spot, 870s., shipment, 810s., c.i.f.

Essential and Expressed Oils

ALMOND.—Moroccan, 6s. per lb., duty paid.

AMBER.—Rectified on the spot, 1s. 6d. per lb.

ANISE.—Chinese, 7s. 6d. per lb., spot; shipment, 7s. 4d., c.i.f.

BAY.—West Indian, 12s. 6d. per lb. on the spot.

BERGAMOT.—Spot, from 72s. 6d. per lb.

CAJUPUT.—Spot from 9s. per lb.

CALAMUS.—Spot, 56s. 6d. per lb.

CANANGA.—Spot, from 38s. to 46s. 6d. per lb.

CARAWAY.—Imported oil, 26s. 6d. to 37s. 6d. per lb.

CASSIA.—Spot, 15s. 6d. per lb.; shipment, 15s., c.i.f.

CASTOR.—Home-produced B.P. oil, spot, £153 per ton naked ex mill (2-ton lots).

CEDARWOOD.—American rectified, 6s. 6d. per lb. on the spot.

CITRONELLA.—Ceylon, spot, 7s. 2d.; shipment, 6s. 10d. per lb., c.i.f. Formosan weak, spot, 6s. 6d., in bond; shipment, 6s. 2d., c.i.f.

CINNAMON.—From quillings, best English-distilled is 50s. per oz.; other B.P. oils from 165s. per lb. Ceylon leaf, spot, 9s. 6d. per lb.; rectified, 10s. 6d. per lb.; Seychelles, 10s. 6d., spot.

CUMIN.—Imported oil, 90s. per lb.

DILL.—Imported, 26s. 6d. per lb., spot.

EUCALYPTUS.—Australian 70 to 75 per cent. eucalyptol on the spot is 3s. 6d. per lb. 80–85 per cent., 4s. Spanish (70–75), 3s. 6d. spot. Chinese 3s. to 3s. 6d., duty paid.

FENNEL.—Spanish sweet, spot, 10s. per lb.

GINGER.—Imported; Jamaican, 130s. per lb.; Chinese, 72s. 6d., duty paid.

LEMON.—B.P. grades from 16s. per lb., spot; Sicilian, 25s. 6d. Terpeneless, 500s. per lb.

LEMONGRASS.—Spot, 12s. 9d. per lb., and May shipment, 12s. 5d.; new crop, May-June, 11s. 10½d.

ORANGE.—Spot quotations of sweet oil include Floridan at 35s. per lb.; West Indian, 4s. 6d.; Israeli, 7s. 6d.

PALMAROSA.—Spot, 37s. 6d., per lb., 35s. 6d., c.i.f.

PEPPERMINT.—*Arvensis*: Chinese spot, 37s. 6d. per lb. Brazilian, 17s. spot and shipment, 17s., c.i.f. *Piperita*: Italian "Mitcham-type" from 42s. 6d. to 48s. 6d.; American, 25s. to 30s., as to origin.

PETITGRAIN.—Paraguay 19s. 6d. per lb., spot; shipment, 19s., c.i.f.

PINE.—*Pumilionis* on the spot is 16s. per lb.; *sylvestris*, 25s.; Siberian (*abietis*), 12s. 6d. to 14s.

RUE.—Spanish is 25s. per lb. spot.

SAGE.—Spanish, 8s. per lb.

SANDALWOOD.—Mysore, spot 115s. to 120s. per lb. East Indian, 115s. to 120s.

SASSAFRAS.—Brazilian is from 3s. 6d. per lb., duty paid.

SPEARMINT.—American oil from 67s. 6d. to 70s. per lb. Chinese, none available.

YLANG YLANG.—Spot, from 37s. 6d. to 46s. per lb. as to grade.

UNITED STATES REPORT

NEW YORK, MAY 10: The position in PHENACETIN was growing more competitive as more imported material was being sold at \$1·20 a lb., down four cents. Higher per lb. among CRUDE DRUGS were RHATANY ROOT at 14 cents, up two cents, and GUM ACACIA, at 25½ cents, up half a cent. Hungarian type CHAMOMILE was again easier declining to \$1 a lb. Bourbon GERANIUM moved up \$1 to a new level of \$24 per lb.

CUMULATIVE LIST OF AMENDMENTS TO THE C. & D. Quarterly Price List, March 1

A=Advanced; R=Reduced. ENTRIES NEW THIS WEEK ARE MARKED WITH AN ASTERISK*

1001 (944 PCP)									
furniture barrier cream									
	20	0	..	..	2	6			
	36	0	..	..	4	6			
Accura 3 (1391 CHB)									
electric shaver super ..									
	..	..	..	..	210	0			
sport ..									
	..	..	..	..	175	0			
Actriol (917 Organon) cream									
	15 gm	120	0	..	..	15	0		
Delete	Adexolin (518 Glaxo)								
	liquid ..	16 oz	..	..	..	..	..	..	..
Adrenor (604 Hewlett) L-noradrenaline									
	ampoules 2 mls	..	6	33	0	..	3	8	p1
	100	447	0	..	..	49	8	p1	
	4 mls	..	6	54	0	..	6	0	p1
	100	729	0	..	..	81	0	p1	
Adreson (917 Organon)									
	tablets 5 mgm	..	40	7	4ea	..	..	TS	
	100	17	4ea	..	..	..	..	TS	
	500	77	6ea	..	..	..	..	TS	
	25 mgm	..	20	14	6ea	..	..	TS	
	40	28	6ea	..	..	..	..	TS	
	100	69	0ea	..	..	..	..	TS	
	500	338	0ea	..	..	..	..	TS	
Delete	Aerosporin (208 BW)								
	ointment ..	10 gm	..	..	..	..	..	..	..
Akineton (708 Knoll)									
	tablets ..	..	20	30	0	..	3	4	
	50	54	0	..	..	6	0		
	200	180	0	..	..	20	0		
	ampoules ..	..	6	48	0	..	5	4	
	30	204	0	..	..	22	8		
Albion (339 CG)									
	cotton wool ..	..	1 oz	4	2	..	..	..	..
	1 oz	5	3	..	..	..	..	..	..
	2 oz	8	3	..	..	..	..	..	..
	4 oz	13	9	..	..	..	..	..	..
	8 oz	23	9	..	..	..	..	..	..
	1 lb	3	7 1/2	ea	..	..	..	..	..
Albion (25 AS)									
	ichthammol soap ..	8	10	2	2	1	2		
*	Aldactone (1121 Searle)								
	tablets 100 mgm	..	20	61	8ea	..	92	6	
	100	289	10ea	..	..	434	9		
Allenbury's (34 A&H)									
	pastilles sugarless	2 oz	15	9	..	..	1	9	
Aminopterin (746 Lederle)									
	tablets 100	33	4ea	..	..	50	0		
Ampins (399 CG)									
	for bee keepers,	..	..	..	..	..	..	..	..
	box of 3 No 9B	..	4	9ea	..	6	0	p1	
	5	..	7	9ea	..	9	9	p1	
Anacodin (179 BDH)									
	ampoules 100 mcgm/ml	6	30	0	..	3	9		
	25	126	0	..	..	15	9		
	1000 mcgm/ml	6	60	0	..	7	6		
	25	450	0	..	..	56	3		
Anaesthetic Ether Keiths									
(787 Macfarlan)									
	250 mls	44	0	..	..	..	..	..	..
	500 mls	52	0	..	..	..	..	..	..
Andre Philippe (48 AP)									
	liquid shampoo 22 ..	4 oz	10	0	2	6	1	6	
	men's lacquer aerosol 101	30	0	15	0	..	5	0	
Andre Philippe (48 AP)									
	men's roll-on ..	..	16	10	4	2 1/2	2	6	
Andy (1392 TT)									
	nylon pile beauty mitt	45	6	..	..	5	11		
Ann French (655 ICC)									
	golden tan ..	..	18	0	9	0	2	9	
	cleansing cream ..	..	15	9	7	11	2	6	
*	Anthical (814 M&B) lotion								
	..	..	20	0	5	0	2	11	
	Arthene (347 Dalmas)	..	20	0	5	0	2	11	
	2 oz	23	0	5	9	3	4		
Ascon (37 Allied)									
	dp 80 oz	29	5ea	..	..	p1s7	..	..	..
Aspergum (1330 White)									
	16	15	4	3	10	2	2		
	36	33	0	8	3	4	6		
	dp 250	216	0	..	..	24	0		
Auto-Transparol (980 Photopia)									
	photo corners ..	200	..	..	..	3	2		
Ayroware (78 AS&Co)									
	rubber gloves ..	28	0	1	5	3	6		
Bahama Homesun (1373 Hanovia)									
	lamp ..	..	..	45	0ea	285	0		
Delete	Banocide (208 BW)								
	(Vet.), 200 mgm	..	10	..	..	..	..	..	..
Barosil (267 C&A)									
	dp 1 lb	180	0	..	..	..	..	..	..
Bartex (477 AF&B)									
	superlens sunglasses ..	..	..	..	..	7	11		
	..	..	..	..	..	12	9		
	..	..	..	..	..	15	11		
	superlens elpovers ..	..	..	..	..	7	6		
Becovite (1285 Vitamins)									
	tablets ..	100	40	0	..	5	0		
	500	160	0	..	..	20	0		
	1000	300	0	..	..	37	6		
Bemaphate (142 BML)									
	tablets ..	25	45	0	..	5	7 1/2		
	100	147	0	..	..	..	..	..	..
	500	55	0ea	..	..	..	..	..	..
Bemasulph (142 BML)									
	tablets ..	..	25	45	0	..	5	7 1/2	
	dp 100	147	0	..	..	..	..	..	..
	dp 500	61	6	ea	..	..	..	..	..
	4 oz	24	0	6	0	3	6		
Benilyn (938 PD)									
Bikini Homesun (1373 Hanovia)									
	lamp ..	..	..	58	0ea	368	2		
Biocortar (61 APC)									
	hydrocortisone snuff	9	2ea	..	..	13	9	TS	
	insufflator with six capsules	70	0	..	..	8	9	TS	
	refill capsules	6	17	4ca	..	26	0	TS	
	25	100	66	2ca	..	99	3	TS	
R	Biotta (612 Bobson)								
	vegetable juice	21 oz	7	5 1/2ea	..	9	11		
	tomato and celery	21 oz	7	1 1/2ca	..	9	6		
Bis-Pep (549 Guest)									
	tablets ..	..	6	6	1	7 1/2	1	3	
Bisodol (655 ICC) powder									
	tablets	30	30	3	7	7	4	0	
	100	36	0	9	0	4	9		
Bitonin (147 Boots) tonic									
	tablets ..	..	36	16	0	..	2	0	
	72	28	0	..	..	3	6		
Boldoat (639 HH)									
	towelette ..	5	..	..	..	2	3		
Delete	Bon-Accord (859 Moore) universal face mask.								
B-R (1023 Radiol)									
	Bone Radiol (horses and dogs)	..	..	5 oz	94	6	23	7 1/2	12
	1 gal	99	0ea	24	9ea	156	10		
	1 gal	185	6ea	46	4 1/2ea	294	0		
	healing jelly ..	2 oz	19	0	4	9	2	6	
Bronchodil (142 BML)									
	25	30	0	..	..	p1s1s4A	..	..	..
	100	105	0	..	..	p1s1s4A	..	..	..
	500	32	0ea	..	..	p1s1s4A	..	..	..
Bropirin (195 Brook Parker)									
	tablets	dp 3 x 100	7	6	..	..	..	..	..
Delete	Brovon (859 Moore)								
	bronchial mixture	..	4 oz	..	..	..	..	..	..
	dp 80 oz	..	..	..	..	..	..	..	..
	elixir ..	..	4 oz	..	..	..	..	..	..
	dp 20 oz	..	..	..	..	..	..	..	..
	tablets ..	..	100	..	..	..	..	..	..
	dp 500	..	..	..	..	..	..	..	..
Brownie (711 Kodak)									
	reflex 20 camera	..	..	..	..	87	2		
	case	..	..	..	..	11	1		
Buccillin-P 100 (208 BW)									
	procaine penicillin intra-mammary injection,	100,000 units (Vet.)	12	108	0	..	..	12	0
Calcipen-V (147 Boots)									
	125 mgm	60 mls	106	0	..	..	13	3	TS
Calcium disodium Versenate									
	tablets ..	..	100	192	0	..	..	24	0
	500	864	0	..	..	108	0		
	ampoules 5 mil	6	336	0	..	..	42	0	
	veterinary solution 100 mls	216	0	..	..	..	27	0	
Californian Poppy (677 JK)									
	eau de toilette	7062	28	8	14	0	4	9	
	'Pak-a-Soap' (3)	4824	17	11	4	4	2	6	
Calvert's (219 Calvert)									
	No. 5 carbolic soap, twin bar	10	0	..	..	1	0		
Cambison (614 Hoechst) ointment									
	(distributors 621 Horlicks)	..	..	..	..	..	..	..	..
	0-25% ..	5 gm	40	0	9	9	5	10	TS
	20 gm	128	0	31	2	18	7	TS	
	0-5% ..	5 gm	64	0	15	7	9	3 1/2	TS
	20 gm	204	0	49	9	29	8	TS	
Camyna (969 Pfizer)									
	tincture	20 mls	4	3ea	1	0 1/2ea	7	6	
	lotion	20 mls	4	0ea	1	0ea	7	0	
Carbellon (830 Medo)									
	..	50	18	0	4	6	2	7 1/2	
Carters (1003 PP)									
	little liver pills	..	9	7	2	5	4		
	4 doz	..	4	doz	..	..	..	..	..
Delete	Cebeviton (676 Johnston)								
	tablets ..	..	..	..	..	..	..	..	..
	elixir ..	..	..	..	..	..	..	..	..
Censedal (814 M&B)									
	tablets 60 mgm	..	25	18	0	..	..	2	3
	500	220	0	..	..	27	6	p1s1s4A	
	200 mgm	..	25	40	0	..	5	0	p1s1s4A
	500	560	0	..	..	70	0	p1s1s4A	
Centyl (747 Leo)									
	tablets 2-5 mgm	..	25	36	0	..	..	4	0
	100	138	0	..	..	15	4		
	500	52	0ea	..	..	69	4		
	5-0 mgm	..	25	66	0	..	..	7	4
	100	231	0	..	..	25	8		
	500	92	9ea	..	..	123	8		
Ceranban (339 CG)									
	diachylon bandage	..	3 in	58	9	..	..	6	10 1/2
	4 in	76	9	..	..	9	0		
Cestra (1073 Robinson)									
	face mask	..	116	2	..	12	11		
	gross	..	..	..	..	doz	..	..	..

	Deaner (1061 Riker)	tablets	100	264	0	66	0	38	6
			500	1080	0	270	0	157	6
*	Decadron (837 MSD)	lotion		192	0	..	..	24	0
	Decortisyl (1087 Roussel)	tablets 1 mgm	100	108	0	..	..	13	6 TS
			500	432	0	..	..	54	0 TS
	5 mgm		30	132	0	..	..	16	6 TS
			100	390	0	..	..	48	9 TS
			500	1860	0	..	..	232	6 TS
	Definol (673 J of H)	developer ..	100 mls	..	..	..	..	3	0
			500 mls	..	..	..	..	10	0
	Delfen (922 Ortho)	with applicator	..	76	0	..	..	9	6
		tube only ..	..	56	0	..	..	7	0
	Delta-Cortef (1263 Upjohn)	tablets 5 mgm	30	11	0ea	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	Delta-Cortelan (518 Glaxo)	tablets 1 mgm	100	9	0ea	..	..	12	0 TS
			500	36	0ea	..	..	48	0 TS
	5 mgm		30	11	0ea	..	..	14	8 TS
			100	32	6ea	..	..	43	4 TS
			500	155	0ea	..	..	206	8 TS
	Deltacortone (837 MSD)	tablets 1 mgm	100	9	0ea	..	..	..	TS
			500	36	0ea	..	..	..	TS
	5 mgm		30	11	0ea	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	Delta-Cortril (969 Pfizer)	tablets 1 mgm	100	9	0ea	..	..	..	TS
			500	36	0ea	..	..	..	TS
	5 mgm		20	7	4ea	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	intramuscular injection	25 mgm/ml	5 mls	23	0ea	..	..	..	TS
	enteric-coated tablets	2-5 mgm	100	22	6ea	..	..	..	TS
			500	108	3ea	..	..	..	TS
	Delta-Genacort (502 Genatosan)	tablets 1 mgm	100	108	0	..	..	..	TS
			500	36	0ea	..	..	..	TS
	5 mgm		20	93	0	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	Deltastab (147 Boots)	injection 25 mgm 5 mil vial	23	0ea	..	..	..	30	8 TS
	tablets 1 mgm		30	2	9ea	..	..	3	8 TS
			100	9	0ea	..	..	12	0 TS
			500	36	0ea	..	..	48	0 TS
	5 mgm		30	11	0ea	..	..	14	8 TS
			100	32	6ea	..	..	43	4 TS
			500	155	0ea	..	..	206	8 TS
	Deltastab B (147 Boots)	tablets 5 mgm	30	11	0ea	..	..	14	8 TS
			100	32	0ea	..	..	43	4 TS
			500	155	0ea	..	..	206	8 TS
	Dentiline (430 Euceryl)	..	20	0	5	0	2	9	
	refill ..	..	17	4	4	4	2	5	
	Dethlac (506 Gerhardt)	..	44	0	..	..	..	4	11
	DF 118 (394 Duncan)	tablets 30 mgm	25	60	0	..	..	7	6 s1
			100	200	0	..	..	25	0 s1
			500	850	0	..	..	106	3 s1
	Di-Ademil-K (1176 Squibb)	tablets	24	3	9ea	..	..	5	7½
			100	14	6ea	..	..	21	9
			500	65	0ea	..	..	97	6
	Di-Adreson (917 Organon)	tablets 1 mgm	30	3	2ea	..	..	..	TS
			100	9	0ea	..	..	..	TS
			500	36	0ea	..	..	..	TS
	5 mgm		30	11	0ea	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	Di-Adreson-F (917 Organon)	tablets 1 mgm	30	3	2ea	..	..	..	TS
			100	9	0ea	..	..	..	TS
			500	36	0ea	..	..	..	TS
	5 mgm		30	11	0ea	..	..	..	TS
			100	32	6ea	..	..	..	TS
			500	155	0ea	..	..	..	TS
	Dipasic (503G) tablets	..	100	12	0ea	..	..	..	TS
			500	54	0ea	..	..	..	TS
			1000	96	0ea	..	..	..	TS
			5000	..	..	..	..	..	TS
Delete	Disamide (179 BDH)	tablets	25	54	0	..	..	6	9
			100	156	0	..	..	19	6
			500	56	0ea	..	..	84	0
Delete	Distaquaine (208 BW)	suspension (vet)	10 mls	..	..	..	..	..	..
		300,000 units/ml	30 mls	..	..	..	..	..	..
	Distaquaine (378 TDC)	suspension (vet)	90 mls	36	6ea	..	..	54	9p1T
	Distaquaine-V (378 TDC)	tablets 125 mgm	100	36	6ea	..	..	54	9TS
	Distaquaine V-K (378 TDC)	suspension ..	2 oz	8	10ea	..	..	13	3TS
	Distivit (378 TDC) B12	ampoules 100 mcgm	5	2	1ea	..	..	3	1½
		250 mcgm	5	2	11ea	..	..	4	4½
		1000 mcgm	5	7	6ea	..	..	11	3
		100 mcgm/ml	5 mil vial	1	11ea	..	..	2	10½
		1000 mcgm/ml	5 mil vial	7	2ea	..	..	10	9

Delete	Do-Do (657 IL)	asthma tablets	..	7	..	..	..
	* Do-Do (657 IL)	asthma tablets	..	8	10	8	2 8 1 5 s7
	Dorminal (147 Boots)	tablets, gr. 3	100	66	0	..	8 3 p1s4A
	Durophet (1061 Riker)	capsules	30	52	0	..	6 6 p1s4B
		7-5 mgm	300	344	0	..	43 0 p1s4B
		12-5 mgm	30	56	0	..	7 0 p1s4B
		20 mgm	300	372	0	..	46 6 p1s4B
			30	64	0	..	8 0 p1s4B
			300	416	0	..	52 0 p1s4B
	Dylon (816 Mayborn)	wash-cream	..	22	6	..	2 6
	Efcortelan (518 Glaxo)	lotion 1%	20 mls	3	3ea	..	4 4 TS
		1/2%	20 mls	5	Oea	..	6 8 TS
		1%	100 mls	18	9ea	..	25 0 TS
			20 mls	8	3ea	..	11 0 TS
			100 mls	35	6ea	..	47 4 TS
		intra-articular injection	1 mil x 6	8	3ea	..	11 0 TS
			5 mls	6	Oea	..	8 0 TS
		ointment Nos. 1 & 2	15 gm	4	6ea	..	6 0 TS
		1/2%	15 gm	6	9ea	..	9 0 TS
		1%	50 gm	18	9ea	..	25 0 TS
			5 gm	6	Oea	..	8 0 TS
			15 gm	14	3ea	..	19 0 TS
			50 gm	43	6ea	..	58 0 TS
		tablets 20 mgm	100	69	Oea	..	92 0 TS
	Efcortelan-N (518 Glaxo)	eye/ear drops	3 mls	3	7 1/2ea	..	4 10 TS
		eye ointment	3-5 gm	3	Oea	..	4 0 TS
		intra-articular injection	5 mls	6	3ea	..	8 4 TS
		lotion 1/2%	20 mls	5	6ea	..	7 4 TS
		1%	20 mls	8	9ea	..	11 8 TS
		ointment Nos. 1 & 2	5 gm	3	6ea	..	4 8 TS
			15 gm	7	3ea	..	9 8 TS
	Elliman's (414 Elliman)	(distributor, 994 P&M)	..	..	..	..	..
		"universal" embrocation	3929	47	4	11 10	6 4
			6 oz	24	0	6 0	3 6
	Emmotone (571 Staggs)	80 oz	20	Oea	..	..	..
	Endoxana (1305 WB)	vials 100 mgm	10	40	Oea	10 Oea	70 0
		200 mgm	10	53	4ea	13 4ea	93 4
		tablets 50 mgm	50	22	Oea	5 6ea	38 6
			250	100	Oea	25 Oea	175 0
	Energen (421 Energen)	crispbread	..	6 oz	..	..	1 6
Delete	Enseals (413 Lilly)	ferrous sulphate	..	..	..	..	..
	Episol (324 Crookes)	lotion	30 mls	36	0	..	4 6
		cream	30 gm	36	0	..	4 6
		dusting powder	30 gm	36	0	..	4 6
	Epitone (147 Boots)	..	8 oz	26	0	..	3 9
			45	0	..	..	6 6
	Esidrex K (262 Ciba)	tablets ..	25	54	0	..	6 9
			100	20	Oea	..	25 0
			500	81	4ea	..	122 0
	Ethyl chloride (394 Duncan)	100 mls	50	0	..	..	6 3
	Etisui T (649 ICI) cream	5 gm	32	0	..	..	4 0
	Eupinal (339 CG)	with ephedrine	8 oz	56	0	14 0	8 4
	Evan Williams (437 EW)	shampoo cream	tube	18	5	4 7	2 6
	Eyemakers a la Carte (1052 Revlon)	eyebrow pencil propelling	72	0	36	0	12 6
		refills (3)	27	0	13	6	4 6
		eyebrow pencil short	36	0	18	0	6 0
		eye liner pencil	45	0	22	6	7 6
		frosted	57	0	28	6	9 6
		eye shadow stick	51	0	25	6	8 6
		eye shadow pan	87	0	43	6	14 6
		gold, silver, gold bronze	105	0	52	6	17 6
		platinum, platinum/gold	147	0	73	6	24 6
		eye liners liquid	63	0	31	6	10 6
		frosted	87	0	43	6	14 6
		eye lash tipping	129	0	64	6	21 6
		eye shadow brush	72	0	36	0	10 6
		eyebrow brush	31	0	15	6	4 6
		eye liner pencil sharpener	45	0	22	6	6 6
		liquid liner brush	65	0	32	6	9 6
		mascara cake	45	0	22	6	7 6
		refills	30	0	15	0	5 0
		roll on	81	0	40	6	13 6
		refills	52	6	26	3	8 9
		frosted roll on	93	0	46	6	15 6
		remover pads	63	0	31	6	10 6
	Fababistin (452 FBA)	tablets 50 mgm	10	20	0	..	2 6
			250	456	0	..	57 0
	Falapen (394 DF) tablets	100	55	Oea	..	..	82 6 TS
A	Fam-Lax (1068 Roberts)	tablets ..	4	6 1/2	1	6	8
			10	3 1/2	3	5 1/2	1 6
	Feedrite (454 Feedrite)	polythene bottle	..	4 oz	11	0	..
		spare polythene	..	8 oz	14	0	..
	Feen-a-Mint (1330 White)	6	7	0	1	9	1 0
		16	15	4	3	10	2 2
	Fennings (1100 JS)	baby powder	..	14	6	..	1 1

	Lystone (655 ICC) salts ..	22	8	5	8	3	0		
	Marplan (1074 Roche) tablets 10 mgm .. 50	8	4ea	2	1ea	14	7		
	250	31	8ea	7	11ea	55	5		
	Mathaplast (1307 Waterhouse) antiseptic spray bandage	49	0	..	..	5	6	
	Max (855 Mondart) air freshener 8 oz	49	6	..	..	5	6	
	moth proofer 8 oz	49	6	..	..	5	6	
	fly killer 8 oz	49	6	..	..	5	6	
	Max Factor (813 MF) hand cream tube ..	18	0	9	0	3	0		
	roll-on deodorant ..	26	0	17	0	5	9		
<i>Delete</i>	Medac (502 Genatosan) tube	20	0	10	0	3	6		
	Medicel (938 PD) suspension .. 16 oz	85	0ea	..	..	..	..
	Medihaler Cort (1061 Riker) refill	440	0	..	..	55	0	
	.. ..	412	0	..	..	51	6	
	plastic mouthpiece ..	28	0	..	..	3	6	
	Medihaler Epi (1061 Riker) refill	152	0	..	..	19	0	
	.. ..	124	0	..	..	15	6	
	plastic mouthpiece ..	28	0	..	..	3	6	
	Medihaler Iso (1061 Riker) refill	152	0	..	..	19	0	
	.. ..	124	0	..	..	15	6	
	forte	176	0	..	..	22	0	
	refill	148	0	..	..	18	6	
	plastic mouthpiece ..	28	0	..	..	3	6	
	Meggeson (831 Meggeson) mixed fruit pastilles "Hurdler" box ..	13	6	..	..	1	6	
	Melleril (1098 Sandoz) tablets 10 mgm .. 50	40	0	10	0	5	10		
	250	180	0	45	0	26	3		
	25 mgm .. 50	66	0	16	6	9	8		
	250	300	0	75	0	43	9		
	50 mgm .. 50	126	0	31	6	18	5		
	250	570	0	142	6	83	2		
100 mgm .. 50	240	0	60	0	35	0			
250	1080	0	270	0	157	6			
	Mephyton (837 MSD) emulsion 10 mgm per ml 1 mil 6	30	0ea	..	..	..	..
	Midicol (938 PD) suspension .. 16 oz	85	0ea	..	..	..	..
	Mix-A-Shake (621 Horlicks) pkt. .. 1 oz	gross 57	7	..	..	6	..	
	Mixtamycin (378 TDC) solution (vet) .. 90 mls	29	4ea	..	..	44	0 TS	
	Morphy-Richards (863 MR) electric shaver ..	..	..	10	9ea	70	0	
	Mothak (1229 T&C) fly spray aerosol .. 5 oz	33	9	..	..	3	9	
	10 oz	54	10	..	..	6	3	
	5 oz	33	9	..	..	3	9	
	Movel (406 WE) pellets .. 150	12	0	..	..	1	6 p2	
	Muguet des Bois (301 Coty) Cotymist aerosol spray	185	0	92	6	32	6		
	talc lightweight bottle	43	0	21	6	7	6		
	bath salts lightweight bottle	61	0	30	6	10	6		
	Multivite (179 BDH) pellets .. 150	74	0	..	..	9	3	
	Mycil (179 BDH) powder	18	0	..	..	2	3	
	Mycota (147 Boots) powder .. 2 1/2 oz	18	0	..	..	2	3	
	Nail Dry (797 MSG) ampoules .. 10	75	0	37	6	12	6		
	Narphen (1154 S&N) ampoules 2 mgm/ml .. 100	15	0ea	3	9ea	26	3 DD		
	100	120	0ea	30	0ea	210	0 DD		
	Nebadrene (930 P&B) nebuliser ..	9	2	..	..	13	9	
	Neobacin (518 Glaxo) ointment 3-5 gm ..	18	0	..	..	2	0 TS	
	15 gm ..	42	0	..	..	4	8 TS	
	Neothyli (787 Macfarlan) 100 gm	4	0ea	..	..	..	..
	500 gm	16	0ea	..	..	..	..
	Neumandin (147 Boots) tablets, 50 mgm .. 100	23	0	..	..	2	10 1/2	
	1000	138	0	..	..	17	3	
	Neutrapen (208BW) vial	360	0	..	..	45	0	
	Nitoman (1074 Roche) tablets 25 mgm .. 30	6	8ea	1	8ea	11	8		
	150	26	8ea	6	8ea	46	8		
	500	66	8ea	16	8ea	116	8		
<i>Delete</i>	Noctynol (859 Moore) tablets 12	..	..	..	..	..	..
	dp 50	..	..	..	..	..	..
	dp 250	..	..	..	..	..	..
	Noradran (897 NC) Bitabs 50 doses	84	0	..	..	10	6 p1	
	250 doses	368	0	..	..	46	0 p1	
	Bitabs nocte .. 20 doses	48	0	..	..	6	Op1sl#4A	
	100 doses	210	0	..	..	26	3p1sl#4A	
	inhaler	96	0	..	..	12	0	
	Norflex (1061 Riker) tablets 100	20	8ea	..	..	31	0	
	500	93	0ea	..	..	139	6	
	Nuit de Longchamp (Lubin) (1 Abbey) parfum de toilette .. 1 oz	..	..	..	..	17	6	
	2 oz	..	..	..	..	30	0	
	4 oz	..	..	..	..	45	0	
		Nu-seals (413 Lilly) ferrous sulphate gr 5 dp 100	38	0	4	9	
		dp 1000	256	0	32	0	
		dp 5000	1220	0	152	6	
	<i>Delete</i>	Nutinal (147 Boots) tablets 1 mgm .. 100	
		500	

Old Spice (1131 Shulton)	brushless shaving cream	23	0	5	7	3	6
	Omnivite (1285 Vitamins)						
	forte tablets .. 100	15	Oea	..	22	6	
Oplon (1278 Veritas)	tablets, 5 mgm	50	5	3ea	..		
	.. 200	16	4ea	..			
Dele'e	Page Barker (261 Christy)						
	scurf lotion						
	Paracodin (708 Knoll)						
	drops .. 15 mls	36	0	9	0	4	9
	.. 100 mls	204	0	51	0	26	11
	Parador (1229 T&C)						
	air freshener aerosol .. 5 oz	33	9	..	3	9	
	floral disinfectant ..	21	0	..	2	6	
* Parke-Davis (938 PD) vaccines	catarrh prophylactic (set 3)	78	3	..	8	9	
	(set 6)	153	0	..	17	0	
	ampoule 1 mil	27	0	..	3	0	
	r/e vial 5 mls	78	3	..	8	9	
	10 mls	150	0	..	16	8	
	25 mls	249	9	..	27	9	
	catarrh public schools (set 3)	78	3	..	8	9	
	ampoule 1 mil	27	0	..	3	0	
	r/e vial 10 mls	150	0	..	16	8	
	cholera r/e vial 1.5 mls	27	0	..	3	0	
	10 mls	92	3	..	10	3	
	25 mls	211	6	..	23	6	
	diphtheria-pertussis						
	prophylactic (set 3)	51	0	..	5	8	
	r/e vial 10 mls	90	0	..	10	0	
	diphtheria-tetanus prophyl-						
	actic ampoule 0.5 mil	22	6	..	2	6	
	r/e vial 5 mls	54	0	..	6	0	
	diphtheria-tetanus-pertussis						
	prophylactic (set 3)	51	0	..	5	8	
	r/e vial 5 mls	90	0	..	10	0	
	diphtheria prophylactic F.T.						
	(set 2)	36	0	..	4	0	
	r/e vial 10 mls	55	6	..	9	3	
	staphylococcus toxoid A and B						
	r/e vial 1 mil	27	0	..	3	0	
	5 mls	67	6	..	7	6	
	tetanus toxoid r/e vial 1 mil	22	6	..	2	6	
	10 mls	85	6	..	9	6	
	typhoid-paratyphoid A and B						
	r/e vial 1.5 mls	27	0	..	3	0	
	10 mls	92	3	..	10	3	
	25 mls	211	6	..	23	6	
	typhoid-paratyphoid A, B and C						
	r/e vial 1.5 mls	27	0	..	3	0	
	10 mls	92	3	..	10	3	
	25 mls	211	6	..	23	6	
	typhoid-paratyphoid A and B and						
	cholera r/e vial 1.5 mls	27	0	..	3	0	
	typhoid-paratyphoid A and B						
	and tetanus toxoid first						
	and second dose						
	ampoule 1 mil	24	9	..	2	9	
	r/e vial 25 mls	252	0	..	28	0	
	Pasinah-302 (1303 Wander)						
	180	41	Oea	..	61	6	TS
	Paskalium (521 Glenwood) 1 lb	50	1 1/2ea	..	67	6	
	1 kilo	111	4 1/2ea	..	148	6	
	tablets .. 1000	60	Oea	..	80	0	
	Paxette (884 NB)						
	electromatic camera ..	..	..	..	525	0	
	super camera I/L ..	..	..	..	532	6	
	Paxina (884 NB)						
	electromatic camera ..	..	..	..	525	0	
	Payot Dr (870 MV)						
	deodorant	856.71	6	5 1/2ea	2	11 1/2ea	12 4
	Pectamol (179 BDH)						
	linctus .. 2 litres	590	0	..	..	..	..
	Penbenemid (837 MSD)						
	suspension .. 2 oz	78	0	..	9	9	
	tablets .. 12	93	0	..	11	7 1/2	
	Penicillin V-K (147 Boots)						
	tablets 125 mgm .. 100	36	6ea	..	54	9	TS
	500	172	6ea	..	258	9	TS
	250 mgm .. 100	72	Oea	..	108	0	TS
	500	343	Oea	..	514	6	TS
	Penotrane (1305 WB)						
	silicone cream .. 60 gm	5	Oea	1	3ea	8	9
	200 gm	12	Oea	3	Oea	21	0
	500 gm	25	Oea	6	3ea	43	9
	Pentoxylon (1061 Riker)						
	tablets .. 25	36	0	..	4	6	
	100	120	0	..	15	0	
	500	528	0	..	66	0	
	Pepsodent (955 Pepsodent)						
	tooth paste ..	13	9	3	3	1	10
	.. 20 1 1/2	4	9 1/2	2	2	2	8
	Persomnia (70 Aspro) .. 12	17	10	4	5 1/2	2	6
	27	35	8	8	11	5	0
	Pethidine (394 Duncan)						
	hydrochloride tablets						
	50 mgm .. 100	78	0	..	9	9	DD
	500	346	0	..	43	3	DD
	Phenergan (814 M&B)						
	tablets 10 mgm .. 25	20	0	..	2	6	pls7
	500	340	0	..	42	6	pls7
	25 mgm .. 25	32	0	..	4	0	pls7
	500	520	0	..	65	0	pls7
	elixir .. 40 oz	220	0	..	27	6	pls7
	ampoules 2 mls	10	76	0	..	9	6
	cream .. 1 lb	260	0	..	32	6	
	Phillips (976 Phillips)						
	toothpaste ..	20	2	5	0 1/2	2	8
Delete	Pholtex						

Pholcomed (830 Medo)	pastilles .. 30	36	0	..	4	6	pl
	250	240	0	..	30	0	pl
Pinaud (128 Biometica)	after-shave lotion ..	42	0	21	0	7	0
	pre-electric shave lotion	50	0	25	0	8	4
	deodorant cologne ..	60	0	30	0	10	0
	tonic hair lotion ..	50	0	25	0	8	4
	shampoo ..	40	0	10	0	5	10
	lather shaving cream ..	26	3	6	7	3	10
	Lilac Vegetal .. 8 oz	50	0	25	0	8	4
Pineate (655 ICC)	honey cough syrup ..	20	8	5	2	2	9
	Pituitary (61 APC)						
	posterior lobe snuff capsules						
	25	7	11ea	..	11	10	
	100	28	3ea	..	42	4	
	500	133	6ea	..	200	3	
Plantoid (1396 Plantoid)	automatic injector ..	..	..	..	18	9	
	Pleniron (695 TK) tablets 100	4	2ea	..	..	..	..
	1000	38	Oea	..	..	..	..
Plesmet (276 C&C)	tablets .. 1000	240	0	..	30	0	
	Pomp (365 Demuth)						
	(distributors 261 Christy)						
	moth proofers aerosol 12 oz	58	6	..	6	6	
	fly killer aerosol 16 oz	81	0	..	9	0	
Precortisyl (1087 Roussel)	tablets 1 mgm .. 100	108	0	..	13	6	TS
	500	432	0	..	54	0	TS
	5 mgm .. 30	132	0	..	16	6	TS
	100	390	0	..	48	9	TS
	500	1860	0	..	232	6	TS
	1 mil	60	0	..	7	6	TS
	5 mil	276	0	..	34	6	TS
Prodasin (518 Glaxo)	tablets .. 50	4	3ea	..	5	8	TS
	500	31	6ea	..	42	0	TS
Prednelan (518 Glaxo)	tablets 1 mgm .. 100	9	Oea	..	12	0	TS
	500	36	Oea	..	48	0	TS
	5 mgm .. 30	11	Oea	..	14	8	TS
	100	32	6ea	..	43	4	TS
	500	155	Oea	..	206	8	TS
Prednelan-N (518 Glaxo)	intra-articular injection						
	1 mil x 6	20	Oea	..	40	0	TS
	5 mls	33	Oea	..	30	8	TS
Prednisolone (938 PD)	tablets 1 mgm .. 25	36	0	..	4	6	TS
	100	108	0	..	13	6	TS
	500	432	0	..	54	0	TS
	5 mgm .. 25	110	0	..	13	9	TS
	100	390	0	..	48	9	TS
	500	1860	0	..	232	6	TS
Prednisolone (837 MSD)	tablets 1 mgm .. 100	9	Oea	..	TS		
	500	36	Oea	..	TS		
	5 mgm .. 100	32	6ea	..	TS		
	500	155	Oea	..	TS		
Prednisolone (1306 WCL)	tablets 1 mgm .. 30	2	8ea	..	TS		
	100	8	9ea	..	TS		
	500	35	2ea	..	TS		
	5 mgm .. 30	10	9ea	..	TS		
	100	31	8ea	..	TS		
	500	151	2ea	..	TS		
	buffered tablets 5 mgm	30	10	9ea	..	TS	
	100	31	8ea	..	TS		
	500	151	2ea	..	TS		
Prednlsone (1306 WCL)	tablets 1 mgm .. 30	2	8ea	..	TS		
	100	8	9ea	..	TS		
	500	35	2ea	..	TS		
	5 mgm .. 30	10	9ea	..	TS		
	100	31	8ea	..	TS		
	500	151	2ea	..	TS		
	buffered tablets 5 mgm	30	10	9ea	..	TS	
	100	31	8ea	..	TS		
	500	151	2ea	..	TS		
Prednlsone (147 Boots)	tablets 1 mgm .. 30	2	9ea	..	3	8	TS
	100	9	Oea	..	12	0	TS
	500	36	Oea	..	48	0	TS
	5 mgm .. 30	11	Oea	..	14	8	TS
	100	32	6ea	..	43	4	TS
	500	155	Oea	..	206	8	TS
Prednlsone (938 PD)	tablets 1 mgm .. 25	36	0	..	4	6	TS
	100	108	0	..	13	6	TS
	500	432	0	..	54	0	TS
	5 mgm .. 25	110	0	..	13	9	TS
	100	390	0	..	48	9	TS
	500	1860	0	..	232	6	TS
Prednlsone (969 Pfizer)	tablets 1 mgm .. 100	9	Oea	..	TS		
	500	36	Oea	..	TS		
	5 mgm .. 30	11	Oea	..	TS		
	100	32	6ea	..	TS		
	500	155	Oea	..	TS		
Prednlsone (147 Boots)	tablets 1 mgm .. 100	9	Oea	..	TS		
	500	36	Oea	..	TS		
	5 mgm .. 30	11	Oea	..	TS		
	100	32	6ea	..	TS		
	500	155	Oea	..	TS		

Prednisone (1263 Upjohn)									
tablets 5 mgm	30	11	Oea	..	TS	..	..	..	..
	100	32	6ea	..	TS	..	..	..	..
	500	155	Oea	..	TS	..	..	..	..
* Predsol (518 Glaxo)									
eye-ear drops	10	12	6ea	..	16	8	TS	..	..
Predsol-N (518 Glaxo)									
eye-ear drops	3	4	9ea	..	6	4	TS	..	..
* lotion 0-1% ..									
20 mls	13	3	..	..	17	8	TS	..	..
0-25% ..	20	5	Oea	..	6	8	TS	..	..
20 mls	8	9ea	..	..	11	8	TS	..	..
ointment Nos. 1 & 2									
0-25% ..	5 gm	3	Oea	..	4	0	TS	..	..
15 gm	7	3ea	..	..	9	8	TS	..	..
0-5% ..	5 gm	4	9ea	..	6	4	TS	..	..
15 gm	12	3ea	..	..	16	4	TS	..	..
Priatan (708 Knoll)									
tablets ..	20	42	0	10	6	5	6 1/2	..	..
	200	23	Oea	7	Oea	44	3 1/2	..	..
liquid ..	10 mls	36	0	9	0	4	9	..	..
	100 mls	24	Oea	6	Oea	38	0	..	..
ampoules 1-1 mil	6	42	0	10	6	5	6 1/2	..	..
	30	180	0	45	0	23	9	..	..
Primodos (973 Pharmchemicals)									
tablets ..	2	5	Oea	..	7	6	..	..	..
	20	42	6ea	..	63	9	..	..	..
Delete Primodos (973 Pharmchemicals)									
tablets ..	4	6	2ea	..	9	3	..	..	..
	40	52	6ea	..	78	9	..	..	..
Profenil (324 Crookes)	25	32	0	..	4	0	..	..	..
	100	112	0	..	14	0	..	..	..
	250	256	0	..	32	0	..	..	..
Proladone (324 Crookes)									
ampoules 1 mil	6	90	0	..	10	0	DDs1	..	..
	60	666	0	..	74	0	DDs1	..	..
Protamyl (814 M&B)									
tablets ..	50	44	0	..	5	6	pls1s4A	..	..
	500	32	6ea	..	48	9	pls1s4A	..	..
Pulmodrine (830 Medo)									
syrup ..	40 oz	20	Oea	5	Oea	35	0	s7	..
	80 oz	36	Oea	9	Oea	63	0	s7	..
Puromyn (218 Calmic)									
tablets ..	20	34	0	8	6	4	11 1/2	TS	..
Q-tips (1020 Q-tips)	100	8	0	..	1	0	..	..	..
Quatorial (549 Guest)	25	15	0	..	2	6	pl	..	..
Queen (151 Boutalls)									
seaside cream ..	21	0	..	10	6	3	6	..	..
hand cream ..	21	0	..	10	6	3	6	..	..
	36	0	..	18	0	6	0	..	..
Quelque Fleurs (Houbigant (1 Abbey))									
perfume purse diffuser	..	..	..	..	42	0	..	..	..
refill ..	..	..	..	..	27	6	..	..	..
Rapidal (830 Medo)									
tablets improved	250	15	6ea	..	23	3	pls1s4A	..	..
	100	37	10ea	..	14	9	..	..	..
	500	169	4ea	..	254	0	..	..	..
Rauwiloid (1061 Riker)									
..	60	112	0	..	14	0	..	..	..
	500	768	0	..	96	0	..	..	..
and hexamethonium ..	100	252	0	..	34	0	pls1s4A	..	..
	500	1224	0	..	153	0	pls1s4A	..	..
and Veriloid ..	100	488	0	..	61	0	..	..	..
	500	2192	0	..	274	0	..	..	..
Regula (980 Photopia)									
Olympia 1 camera ..	..	..	..	..	599	11	..	..	..
Retina (711K Odak)									
camera IIC ..	..	..	..	..	813	9	..	..	..
IIC ..	..	..	..	..	1,046	3	..	..	..
IIC ..	..	..	..	..	1,395	0	..	..	..
IIS ..	..	..	..	..	1,092	9	..	..	..
IIS ..	..	..	..	..	1,371	9	..	..	..
reflex S ..	..	..	..	..	1,813	6	..	..	..
Retinette (711 Kodak)									
camera IIA ..	..	..	..	..	651	0	..	..	..
Reudel (655 ICC) bath salts									
15 2 ..	3	10	..	..	2	0	..	..	..
Revlon (1052 Revlon)									
aquamarine fragrance	2 oz	..	..	..	12	6	..	..	..
4 oz	..	..	..	..	21	6	..	..	..
spray mist ..	..	..	..	..	29	6	..	..	..
Roberts Windsor (1070 Windsor)									
soap luxury size ..	1106	11	7	2	9	1	6	..	..
bath disks ..	1103	14	9	3	6	1	11	..	..
talcum powder ..	1115	17	3	8	2	2	9	..	..
Robinate (285 Colman)									
sachet ..	..	14	3	..	..	1 1/2	..	..	..
Robinsons (285 Colman)									
Sicilian lemon juice	25 oz	41	0	..	..	4	3	..	..
Roman Holiday (150 Bourjois)									
cologne stick ..	..	..	..	..	5	6	..	..	..
Roter (444 FAIR) tablets									
40	50	0	12	6	6	10	..	..	..
120	144	0	36	0	19	4	..	..	..
360	408	0	..	..	..	..	..	..	..
720	768	0	..	..	..	..	..	..	..
Rozalex (1088 Rozalex)									
waterless skin cleanser tube	22	6	..	..	2	6	..	..	..
stain removing cream .. tube	31	6	..	..	3	6	..	..	..
Rubinstein (596 HR)									
heart shaped lipstick ..	62	0	31	0	10	6	..	..	..
refill ..	38	0	19	0	6	6	..	..	..
Salupres (837 MSD)									
tablets ..	100	20	Oea	..	30	0	..	..	..
	500	90	Oea	..	135	0	..	..	..
Salutone (339 CG)									
8 oz	24	0	6	0	3	9	..	..	..
Sandra (599 Henleys)									
aprons ..	..	12	Oea	0	7ea	18	7	..	..
incontinence pants ..	..	7	Oea	..	10	6	..	..	..
supa-sheets ..	..	14	Oea	..	21	0	..	..	..
Sanipants (339 CG)									
small or medium	..	59	6	2	11 1/2	6	11	..	..

Sanoid (339 CG)		53	3ea	..	..	..	6
first aid outfit refill A137R							7 1/2
Sanoid (339 CG)							1
rigid zinc oxide plaster							0
1/2 in x 1 yd		4	3	..	..	..	5 1/2
1 in x 1 yd		5	3	..	..	..	2
1 in x 3 1/2 yd		13	6	..	..	..	3
1/2 in x 3 1/2 yd		8	6	..	..	..	10
1 in x 5 yd		12	6	..	..	..	5
1 in x 6 yd		19	0	..	..	..	6
2 in x 5 yd		33	3	..	..	..	3
3 in x 5 yd		47	0	..	..	..	6
4 in x 5 yd		61	9	..	..	..	3
1/2 in x 10 yd		20	9	..	..	..	4 1/2
1 in x 10 yd		32	0	..	..	..	9
2 in x 10 yd		59	6	..	..	..	7
3 in x 10 yd		83	3	..	..	..	9
4 in x 10 yd		104	0	..	..	..	2
elastic zinc oxide							
1 in x 1 yd		11	3	..	..	..	4
2 in x 1 yd		17	6	..	..	..	0 1/2
1 in x 3 yd		24	6	..	..	..	10 1/2
2 in x 3 yd		40	9	..	..	..	9
plastic baby pants							
nylon covered med D96		46	3	..	..	..	11
large ..		49	0	..	..	..	5
Satin Set (1052 Revlon) 7 oz		..	..	..	..	..	6
Scentinel (889 NH) Milkoola		16	0	2	0	2	0
Scentinel (889 NH)							
Quiff aerosol		36	0	..	..	..	11
Wham aerosol		36	0	..	..	..	11
Secto (1123 Secto)							
ant killer aerosol .. 5 oz		..	..	..	..	..	6
Selgin (502 Genatosan)							
tooth paste		19	6	5	0	2	9
Silk Film (596 HR) ..		61	0	31	0	10	6
Skin Deep (76 Atkinson)							
plain or tinted tube ..		19	7	9	7	3	3
jar ..		39	3	19	2	6	6
Skin Thln (774 LR)							
rubber gloves .. ..		..	..	..	..	..	6
Slumba Roll (888 Newey)							
1/4 in. hair roller ..		8	4	2	1	1	3
Sodium Versenate (1061 Riker)							
ampoules 5 mls .. 6		336	0	..	..	42	0
Sonergan (814 M&B)							
tablets 50		60	0	..	..	7	6
500		46	8ea	..	..	70	0
Sooty (331 C of C)							
shampoo sachets		5	0	1	3	9	9
Soventol (708 Knoll)							
tablets 20		36	0	9	0	4	9
200		25	6ea	6	4 1/2ea	40	4 1/2
jelly 20 gm		30	0	7	6	3	11 1/2
Soventol G (708 Knoll)							
dragees 20		36	0	9	0	4	9
200		25	6ea	6	4 1/2ea	40	4 1/2
Spa Brushes (1167 Spa)							
"Dome Cut"							
streamline w/lt tall-comb .. 827		36	0	9	0	5	3
featherweight styling 820		24	0	6	0	3	6
"luxury" ladies hair-brush ebony .. 2106		..	..	..	..	43	6
rosewood ..		..	..	..	..	27	0
"Guardman" military brush set .. 806P		..	..	..	..	17	0
Sparklets (1168 Sparklet) syphons							
streamline model .. 792		0	96	6	96	0	6
Hostmaster model .. 565		0	69	0	68	6	6
"C" bulbs .. 10		49	6	..	..	5	6
HC3 dental sprays .. 78		0ea	22	10ea	120	4	6
(on prescription) .. 78		0ea	..	..	97	6	6
Sprayclean (1388 Durazone)							
spot remover .. ..		..	..	..	..	3	3
Spre (955 Pepsodent)							
fruit squash sachet ..		39	0	..	..	4	4
Springtime in Paris (150 Bourjois)							
presentation perfume .. ..		..	..	..	..	17	6
purse flacon .. ..		..	..	..	..	7	6
spray mist .. ..		..	..	..	..	15	6
cologne stick .. ..		..	..	..	..	5	0
bath cubes 6		..	..	..	..	3	6
talc .. ..		..	..	..	..	4	6
soap 3		..	..	..	..	3	9
Stein (1395 Purser)							
self-illuminating microscope		88	4ea	..	..	132	6
Steiner (1188 Steiner)							
"pearl foam" shampoo							
packet .. ..		..	..	..	..	10	9
bottle .. ..		..	..	..	..	3	9
Silimplete (1352 Wyeth)							
elixir 4 oz		48	0	..	..	5	4
40 oz		32	6ea	..	..	43	4
Streptaquaine (378 TDC)							
5-0 gm/15 mls .. single		6	0ea	..	..	9	0
1-0 gm/4 mls .. 5		7	6ea	..	..	11	3
5-0 gm/20 mls .. single		6	0ea	..	..	9	0
Stresscaps (746 Lederle)		30	..	..	..	..	TS
Strix (589 Moore)							
tablets dp 500		..	..	..	..	..	TS
Suba-Seal (479 WF) hot water bottles							
No. 3 standard with handle		60	0	..	..	7	6
streamline		68	0	..	..	8	6
comet		68	4	..	..	7	11
gaywarm		68	0	8	6

- (234 Cartwright) = W. B. CARTWRIGHT, LTD., Rawdon, Leeds. Rawdon 713/6.
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 (521 Glenwood) = GLENWOOD LABORATORIES LTD., 21 Jockeys Fields, Bedford Row, London, W.C.1. Chancery 5988.
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 (654 Innox) = INNOXA (ENGLAND) LTD., 1 Eden Street, N.W.1.
 (673 J of H) = JOHNSONS OF HENDON LTD., Hendon Way, London, N.W.4. Hendon 8051.
 (677 JK) = JOSEPHINE KELL, LTD., 24 Old Bond Street, London, W.1. Hyde Park 7353.
 (708 Knoll) = KNOLL LTD., 20 Gerrard Street, London, W.1. Gerrard 3246.
 (726 Lancome) = LANCOME (ENGLAND) LTD., 14 Grosvenor Street, London, W.1. Hyde Park 6811.
 (747 LEO) = LEO LABORATORIES, 223 Kensington High Street, London, W.8. Western 3888.
 (797 MSG) = MARIA ST. GEORGE LTD., 12 Phillimore Terrace, London, W.8.
 (809 M&W) = MATTHEWS & WILSON, LTD., 45 Morrish Road, London, S.W.2. Tulse Hill 5881.

TRADE MARKS

APPLICATIONS ADVISED BEFORE REGISTRATION

From the "Trade Marks Journal," May 4

- For photographic chemicals (1)*
 MONOPHEN, 799,332, by Ilford, Ltd., Ilford, Essex.
For perfumes and toilet waters (3)
 FAUVET, 784,806, by Neiman-Marcus, Dallas, Texas, U.S.A.
For detergents, not for use in industrial and manufacturing processes (3)
 DOBY, B794,312, by E. R. Holloway Sales, Ltd., Welwyn Garden City, Herts.
For all goods, but not including toilet powder, toilet rouge, or textile wads impregnated with perfumed soap, or any goods of the same description as any of these (3)
 ARBEN, 793,169, by Feltham & Franks, Ltd., London, E.17.
For soapless detergents (not for use in industrial or manufacturing processes) (3)
 AYRTOPOL, 796,641, by Ayrton, Saunders & Co., Ltd., Liverpool, 1.
For perfumes, non-medicated toilet preparations, cosmetic preparations, eau-de-Cologne, brilliantine, after-shave lotion and soaps (3)
 COTY CLUB, COTY CLUE, 798,150-51, by Coty (England), Ltd., London, W.1.
For perfumes, toilet preparations (not medicated), cosmetic preparations, dentifrices, depilatory preparations, toilet articles (not included in other classes), sachets for use in waving the hair, soaps and essential oils (3)
 FOOLHARDY, 799,199, by D. R. Collins, Ltd., London, W.1.
For preparations of vitamins and minerals for use as nutritional additives to foodstuffs; herbal teas, edible seeds and oils, all for medicinal purposes; and infants' and invalids' foods (5)
 Device with word NATRODALE, 791,961, by J. I. Rodale & Co., Ltd., London, W.14.
For preparations of vitamins and minerals, being goods in the form of tablets, powders, liquids or granules and for use as nutritive adjuncts to foodstuffs (5)
 Device with word NATROVITE, 792,021, by J. I. Rodale & Co., Ltd., London, W.14.
For all goods (5)
 DAQUINAL, 792,763, by Riker Laboratories, Ltd., Loughborough, Leics. UBIQUIN, 796,932, by Espe Fabrik Pharmazeutischer Preparate, G.m.b.H., Seefeld, Oberbayern, Germany.
 TIGADOXIN, 800,356, by Roche Products, Ltd., Welwyn Garden City, Herts. BEROTEC,

800,759, by C. H. Boehringer Sohn, Ingelheim-on-Rhine, Germany. FORTISUN, 800,877, by Bristol-Myers Co., New York, U.S.A. CRISODOL, 801,239, by Glaxo Laboratories, Ltd., Greenford, Middlesex. PENBROCK, 788,058, by C. L. Benard, Ltd., London, N.W.10.
 REZESTA-B, B788,355, by Tom E. Hobson, Ltd., London, S.W.19.

For veterinary preparations (5)

VEVALOG, 794,378, by E. R. Squibb & Sons, Ltd., London, W.1.

For disinfectants, insecticides, fungicides, larvicides, germicides, bactericides, pesticides, and preparations for destroying vermin, all containing sulphur (5)

THIODAN, 794,489, by Farbwerke Hoechst, A.G. vormals Meister Lucius & Brünning, Frankfurt-on-Main, Germany.

For pharmaceutical preparations and substances (5)

LEMBENA, 796,157, by Beecham Foods, Ltd., Brentford, Middlesex. DRYPTAL, 796,732, by West Pharmaceutical Co., Ltd., Hove, Sussex.
 HYDROTHIDE, 798,415, by Medo-Chemicals, Ltd., London, N.W.5.

For anesthetics, and pharmaceutical preparations containing anesthetics (5)

MYCICAIN, 796,553, by Duncan, Flockhart & Co., Ltd., Edinburgh.

For pharmaceutical preparations for the treatment of cardiovascular diseases (5)

CARVASIN, 796,601, by American Home Products Corporation, New York, U.S.A.

For pharmaceutical preparations in tablet form, containing enzymes, for human use in the relief of indigestion (5)

VALZYM, 798,136, by Hormo-Pharma, Ltd., London, S.W.1.

For antibiotics and antibiotic preparations (5)

KIROMYCIN, 798,499, by Les Laboratoires Français de Chimiothérapie, S.A., Paris, France.

For pharmaceutical preparations consisting of or containing lutin hormones (5)

LUTINON, 798,742, by Parke, Davis & Co., Detroit, Michigan, U.S.A., and Staines Road, Hounslow, Middlesex.

For pharmaceutical preparations in cream form for use in the treatment of the skin (5)

NAPRODERM, 799,103, by Harry Isaac Katz, Leeds, Yorks.

For pharmaceutical preparations and substances for human and veterinary use (5)

ORNADE, 799,287, by Smith Kline & French Laboratories, Ltd., Welwyn Garden City, Herts.
 ORGADILAN, 799,768, by Organon Labora-

- (816 Mayborn) = MAYBORN PRODUCTS LTD., Dylon Works, Berrymans Lane, London, S.E.26. Sydenham 4422.
 (830 Medo) = MEDO-CHEMICALS, LTD., 144 Fortess Road, London, N.W.5. Gulliver 3352.
 (831 Meggeson) = MEGGESON & CO., LTD., Llewellyn Street, London, S.E.16. Bermondsey 1741.
 (884 NB) = NEVILLE BROWN & CO., LTD., 77 Newman Street, London, W.1. Langham 7161.
 (888 Newey) = NEWAY BROTHERS LTD., Brearley Street, Summer Lane, Birmingham, 19.
 (890 NC & C) = NEWTON CHAMBERS & CO., LTD., Thornecliffe, Sheffield. Ecclesfield 3171.
 (944 PCP) = P C PRODUCTS, LTD., 33 Union Street, London, S.E.1. HOP 2841.
 (1028 Rapidol) = RAPIDOL LTD., Inecto House, 27 Dover Street, W.1.
 (1123 Secto) = SECTO LTD., Shaw Street, Blackburn, Lancs.
 (1229 T&C) = THOMPSON & CAPPER LTD., Speke Hall Road, Liverpool, 24. Hunts Cross 1321.
 (1242 Toni) = TONI COSMETICS, Harlequin Avenue, Brentford, Middlesex. Isleworth 4343.
 (1272 VB&G) = V. B. & G. PRODUCTS, 16 Queen Street, Leicester. Leicester 59413.
 (1278 Veritas) = VERITAS DRUG CO., LTD., 223 Kensington High Street, London, W.8.
 (1306 WCL) = WARD CASSON LTD., 146 Holborn, London, E.C.1. Chancery 9664.
 (1307 Waterhouse) = J. WATERHOUSE & CO., LTD., Church Street, Old Square, Ashton-under-Lyne. Ashton 3693.
 (1388 Durazone) = DURAZONE (SALES), LTD., Lovers Walk, Ballards Lane, London, N.3.
 (1389 Velvet) = VELVET CREPE PAPER CO., LTD., Alperton, Middlesex.
 (1390 SFA) = SAFETY FIRST AID CO., LTD., 12 Duke Street, London, S.W.1.
 (1391 CHB) = CHB SUPPLIES, Market Chambers, Market Place, Blackheath, Birmingham.
 (1392 TT) = TEDSON THORNLEY & CO., LTD., Rochdale, Lancs.
 (1393 Hazlewood) = HAZLEWOOD & SONS, LTD., Factory Lane, Derby Road, Widnes, Lancs.
 (1395 Purser) = PURSER'S LONDON (HOLBORN) LTD., 12 Fulwood Place, W.C.1.
 (1396 Plantoid) = PLANTOIDS LTD., 153 Masons Hill, Bromley, Kent.

atories, Ltd., London, W.C.2.
For foodstuffs for animals, none being, or containing fish or meat (31)
 POLO, 796,165, by Rowntree & Co., Ltd., York.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Monday, May 16

ENFIELD CHEMISTS' ASSOCIATION, "Enfield Arms" (adjoining Enfield Town station), at 7.30 p.m. Annual meeting.

Tuesday, May 17

HARROGATE BRANCH, PHARMACEUTICAL SOCIETY, Bluc Bird café, Parliament Street, Harrogate, at 7.30 p.m. Annual meeting.

HERTS BRANCH, PHARMACEUTICAL SOCIETY, Hertford secondary school, Mangrove, Hertford, at 8 p.m. Meeting.

LIVERPOOL BRANCH, PHARMACEUTICAL SOCIETY, Adelphi hotel, at 8 p.m. Annual meeting.

LONDON SECTION, ROYAL INSTITUTE OF CHEMISTRY, Baird & Tatlock (London), Ltd., Higham Lodge Works, Blackhorse Lane, London, E.17, at 2.30 p.m. Visit.

WOKING BRANCH, PHARMACEUTICAL SOCIETY, Red House hotel, Woking, at 8 p.m. Mr. E. C. Buckman on "The Modern Trend of Photography."

Wednesday, May 18

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY, Prestbury Golf Club, Ucal Trophy and prize.

SOUTH LONDON AND SURREY PHARMACISTS' GOLFING SOCIETY, Croyham Hurst golf club, Croyham Road, South Croydon, at 1.30 p.m. Stableford competition for the Widocks memorial trophy and Bobby Locke trophy.

Thursday, May 19

BEDFORDSHIRE BRANCH, PHARMACEUTICAL SOCIETY, Luton and Dunstable hospital, Luton, at 7.45 p.m. Films.

LONDON CHEMISTS' GOLFING SOCIETY, Hendon golf club (Sunnyhill 3245), Visitors' day.

Saturday, May 21

LONDON BRANCH, GUILD OF PUBLIC PHARMACISTS, Russell hotel, Russell Square, London, W.C.1, at 7 p.m. Dinner.

PATENTS

(by permission, Controller, H.M. Stationery Office)
COMPLETE SPECIFICATIONS ACCEPTED
 From the "Official Journal (Patents)," May 4

Therapeutic preparations, CIBA, LTD., 839,391.
 Extraction of alkaloids, Whiffen & Sons, Ltd., 839,403.
 Chlorinated phenols, Cocker Chemical Co., Ltd., G. Watson and G. W. Gladden, 839,972.
 Steroid compounds and their preparation, Soc. Farmaceutici Italia, 839,376.
 Process for the preparation of a vaccine containing live attenuated infectious canine hepatitis virus, Allied Laboratories, Inc., 839,876.
 Quaternary ammonium compounds and preparation thereof, Rohm & Haas Co., 839,573.
 Diagnostic composition, Miles Laboratories, Inc., 839,644.
 Steroids and the synthesis thereof, Olin Mathieson Chemical Corporation, 839,698.
 Phenothiazine derivatives, Farbenfabriken Bayer, A.G., 839,784.
 Compositions containing pyridinethianes, Olin Mathieson Chemical Corporation, 839,495.
 Process for preparing a pyridoxine, C. Pfizer & Co., Inc., 839,583.
 Derivatives of etiocholane and the preparation thereof, Laboratoires Français De Chimiotherapie, 839,911.
 Polymethylene bis-quinolinium and iso-quinolinium salts, Allen & Hanburys, Ltd., 839,505.
 Arylides, J. R. Geigy, A.G., 839,506.
 Production of acetyl-substituted pyridines, Distillers Co., Ltd., 839,522.
 Substituted thiolides and compositions containing them, Astra Apotekarnes Kemiska Fabriker, A.B., 839,943.
 Acetylenically unsaturated ethanolamines and process for their preparation, Miles Laboratories, Inc., 839,289.
 Process for the manufacture of N-cycloalkylsulfamic acids and alkali or alkaline earth metal salts thereof, CIBA, Ltd., 839,416.
 Process for the production of benzothiazole-2-dicyclo-alkyl-sulphenamides, Farbenfabriken Bayer, A.G., 839,417.
 Adrenocorticotrophic hormone preparations and process for making same, Organon Laboratories, Ltd., 839,300.
 Carbazinic acid derivative, Olin Mathieson Chemical Corporation, 839,734.
 Nitrogenous derivatives of dipentene having cytostatic action, and the production of the same, Badische Anilin- & Soda-Fabrik, A.G., 839,305.
 Diaminonitropropiophenones and process for their preparation, Soc. Farmaceutici Italia, 839,028.
 5-arylsulphonamido-3-substituted 1,2,4-thiadiazole derivatives, Farbenfabriken Bayer, A.G., 839,316.
 Insecticidal compositions, Associated Fumigators, Ltd., 839,849.
 Composition for destroying and/or inhibiting undesirable plant growth, Heyden-Newport Chemical Corporation, formerly Heyden Chemical Corporation, 839,372.
 Unsaturated thioureido ethers, polymers thereof and process of making them, Rohm & Haas Co., 839,856.
 Preparation of vinyl thioethers, Rohm & Haas Co., 839,857.
 Preparation of thioethers, Rohm & Haas Co., 839,561.
 Thiophosphoric acid esters, Farbenfabriken Bayer, A.G., 839,897.
 Phosphate compound process for preparing same and insecticidal compositions containing same, Wisconsin Alumni Research Foundation, 839,725.
 Compounds of 0,0'-dialkylphosphoric or -thiophosphoric acids and a process for their production, Badische Anilin- & Soda-Fabrik, A.G., 839,924.
 Pesticidal compositions, Farbenfabriken Bayer, A.G., 839,529.
 Method for the preparation of ortho-vinyltoluene, Dow Chemical Co., 839,612.
 Cast forming bandages, Johnson & Johnson, 839,853.
 Surgical dressings, Robinson & Sons, Ltd., 839,718.
 Treatment of pruning cuts or wounds in trees, shrubs and the like, I.B.E., Ltd., 839,789.
 British patent specifications are obtainable (price 3s. 6d. each) from the Patent Office.

TELEVISION

Figures in the columns represent number of appearances of the product during the week.

May 22-28	London	Midland	North	Scotland	Wales	South	N.E.	Anglia	Ulster
Alka-Seltzer	...	2	2	2	2	2	2	1	2
Anadin	...	—	—	—	4	5	1	—	4
André Philippe bubble bath	...	—	—	—	—	—	1	—	—
Andrews liver salt	...	—	—	—	—	4	—	3	—
Anne French	...	1	—	—	1	—	—	—	—
Askit	...	—	—	—	12	—	—	—	7
Aspro	...	6	4	3	4	7	4	3	—
Beecham's pills	...	2	2	2	2	1	2	2	1
Beecham's powders	...	3	3	3	3	3	4	2	3
Biladin	...	—	—	—	—	—	3	—	—
Bisodol	...	—	—	—	3	—	—	5	3
Christy's lanoline face pack	...	2	2	1	2	2	2	2	2
Coldrex	...	1	—	—	—	—	—	—	—
Cuticura	...	2	—	—	—	—	—	—	—
Delsey	...	—	—	—	3	—	—	3	—
Dixoi products	...	2	1	—	—	2	—	—	—
Ellimans Universal embrocation	...	—	—	—	—	—	—	1	—
Euthymol tooth-paste	...	—	—	—	—	—	—	—	3
Fashion Style	...	2	2	2	2	2	2	2	2
Formula 21	...	3	3	3	3	3	3	3	3
Freshaire	...	2	2	3	1	2	2	2	1
Fynnon salts	...	2	2	2	2	2	2	2	2
Germolene	...	2	1	1	1	—	—	1	1
Halc disinfectant	...	4	—	—	—	—	—	—	—
Hemotabs	...	—	—	2	—	—	—	—	—
Immac	...	1	1	1	—	1	—	1	2
Imperial Leather soap	...	2	2	3	2	2	2	2	2
Kruschen	...	—	—	2	—	—	—	1	—
Kwells	...	2	1	1	—	1	—	2	1
Lanospray	...	4	4	4	4	4	4	4	4
Marigold baby pants	...	3	1	—	—	—	—	—	—
Max Factor	...	2	2	2	3	2	2	2	2
Milk of Magnesia-tablets	...	1	1	—	—	—	—	—	1
Monastery herbs	...	—	—	—	—	—	—	3	—
Pal-Injectomatic	...	5	5	5	5	5	4	5	5
Pepsodent tooth-paste	...	4	3	3	3	3	3	3	3
Phyllosan	...	—	—	—	—	—	—	1	1
Placentubex	...	—	—	—	—	—	3	—	—
Radox	...	1	—	—	—	—	—	—	—
Ramer sponges	...	1	—	—	—	—	—	—	—
Remington shavers	...	2	1	—	—	—	1	1	—
Rennics	...	1	1	3	1	3	1	1	1
Rimmel "Beauty on a budget"	...	1	—	1	1	—	—	1	—
Riester pastilles	...	1	1	1	1	4	2	1	3
Rivella	...	3	—	—	—	—	—	—	—
Scentinel Swiss	...	—	1	1	1	—	—	1	—
Sek	...	1	—	1	1	1	—	—	—
Setlers	...	2	2	—	—	—	1	1	—
Silvikrin hair cream	...	4	3	—	—	—	—	—	2
Sparkleen	...	—	—	—	—	—	2	—	—
Spree fruit squash	...	6	6	6	6	6	6	6	6
Tru-gel	...	3	5	5	2	3	3	3	3
Winspray products	...	—	—	—	—	—	1	—	—
Yeast-vite	...	1	1	—	—	—	—	—	—

PRINT AND PUBLICITY

PRESS ADVERTISING

BURROUGHS WELLCOME & CO., Euston Road, London, N.W.1: Marzine. In *Daily Express*, *Daily Mirror*, *Woman*, *Woman's Own*, *Woman's Realm* and *Woman's Illustrated*.
 CUSSONS, SONS & CO., LTD., Kersal Vale, Manchester, 7: Cussons talcum powder. In *Woman* and *Woman's Own* between June and September.
 FASSETT & JOHNSON, LTD., 86 Clerkenwell Road, London, E.C.1: Spray-Tan. In *Reader's Digest*, *Woman's Own*, *Daily Express* and *Daily Mirror*.
 LAUGHTON & SONS, LTD., Warstock Road, Birmingham, 14: Stratton compacts. In *Vogue*, *Modern Woman*, *Everywoman*, *Vanity Fair*, *She*, *Woman* & *Beauty*.
 OPTREX, LTD., Wadsworth Road, Perivale, Greenford, Middlesex: Optrex eye lotion. In *Daily Express*, *Empire News*, *People*, *Sunday Express*, *Sunday Dispatch*, *Sunday Pictorial*, *Today* and *Reader's Digest* from April to July. Optone

eye drops. In *Daily Express*, *Daily Mail*, *Auto-car*, *Motor*, *Motor Sport*, *Antosport*, *Daily Mirror*, *Sunday Express*, *Woman*, *Woman's Own*, *Woman's Day*, *Woman's Realm*, *Woman's Illustrated*, *Woman's Mirror*, *Everywoman*, *Modern Woman*, *She*, *Woman* & *Beauty* and *Woman's Journal* from April to September.

PEPSOFT, LTD., 449 London Road, Isleworth, Middlesex: Model Set. In *Everywoman*, *Modern Woman*, *She*, *Vogue*, *Woman* & *Beauty*, *Woman*, *Woman's Realm*, *Woman's Own*, *Mirabelle*, *Valentine* and *Daily Mirror*.

RAOIOL CHEMICALS, LTD., Radian House, 78 Upper Richmond Road, London, S.W.15: Radian B. In national and provincial newspapers, women's publications and sporting magazines.

JANE SEYMOUR, LTD., 162 New Bond Street, London, W.1: Corvette. In *Daily Express* and *Daily Mirror*.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals.

ELSHOLTZIA OIL and its application in perfumery. *American Perfumer and Aromatics*, April.

THE EFFECT of sorbic acid and other preservatives on organism growth in typical nonionic emulsified commercial cosmetics. *American Perfumer and Aromatics*, April.

STEREOAL SAPOGENINS and derived steroid hormones. *American Perfumer and Aromatics*, April.

BUNAMIOXYL, Cholecystography with. *J. Amer. med. Ass.*, April 23.

TREATMENT of thrombophlebitis with streptokinase-streptodornase. *J. Amer. med. Ass.*, April 23.

THROMBOCYTOPENIA induced by administration of sodium para-aminosalicylate. *J. Amer. med. Ass.*, April 23.

SORBITOL. *Industr. Chem. Engng.* April.

CORTISONE. Treatment of polyarteritis nodosa with. Result after three years. *Brit. med. J.*, May 7.

ACUTE POISONING with ethinamate and with carbromal. *Brit. med. J.*, May 7.

PURGATIVES and laxatives. *Brit. med. J.*, May 7. A new diagnostic test in amyloidosis. *The Lancet*, May 7.

ISONIAZID only. *The Lancet*, May 7.

YEASTS. Comparative studies of. *Nature*, May 7.

DOLICHOL: a Naturally Occurring Isoprenoid Alcohol. *Nature*, May 7.

ALKALOIDS of *Argemone minuta* subsp. *rutundata*. *J. Amer. pharm. Ass.*, April 1960.

NEW GASTRIC ANTACIDS. Preparation and Properties of. *J. Amer. pharm. Ass.*, April 1960.

ANTIDOTAL effectiveness of sodium cobaltinitrite in antagonising cyanide poisoning in albino mice. *J. Amer. pharm. Ass.*, April 1960.

A PRELIMINARY pharmacologic investigation of the roots of *Bixa orellana*. *J. Amer. pharm. Ass.*, April 1960.

INTERACTION of citrate with aspirin and benzoic acid. *J. Amer. pharm. Ass.*, April 1960.

VERATRUM ALKALOIDS. The structure of cevadine. *J. Amer. pharm. Ass.*, April 1960.

NOVOBIOCIN. Some Pharmaceutical Properties of. *J. Amer. pharm. Ass.*, April 1960.

BETA-PROPIOLACTONE. Sterilisation of instruments and materials with. *J. Amer. med. Ass.*, April 16.

WILLS

MR. C. J. H. BOOTH, M.P.S., 321A Ballards Lane, London, N.12, left £1,313 (£1,257 net).

MR. S. W. BOWNESS, M.P.S., Gaites Head, Gayle Hawes, Yorks, left £2,280 (£1,815 net).

MR. W. V. HEATH, M.P.S., 17 Alexandra Drive, Seaview Estate, Prestatyn, Flints, left £928 (£822 net).

MR. L. W. HOBSON, M.P.S., Rosbank, Townfield Lane, Mollington, Ches, left £10,102 (£9,990 net).

MR. T. E. HUGHES, M.P.S., Rhydonen, Clwyd Avenue, Prestatyn, left £15,124 (£14,847 net).

MR. O. LEWIS, M.P.S., Tudor Lodge, Penmaenmawr, N. Wales, left £11,750 (£11,663 net).

